Innovation in Business to Business Payment Services: a contextual approach to future innovation

DAVID JACKSON
Innovation in Business to Business Payment Services: a contextual approach to future innovation

by

David Jackson
Abstract
Payments take place every day in exchange for goods and services. There are a large variety of different methods which can be used to make a payment, and multiple scenarios in which payments take place. Recently there has been a significant amount of innovation in the Payment Services sector, however the majority of this innovation has occurred in the Business-to-Consumer (B2C) market, leaving the Business-to-Business (B2B) market relatively devoid of innovations. This raises the question, why are there limited successful innovations in B2B Payment Services? Furthermore, are there areas for innovation in the realm of B2B Payments?

To explore this perceived gap in innovation, the payment methods available to small B2B companies were examined to identify key challenges and areas for future innovation in B2B payments. The research contains primary data from semi-structured telephone interviews with five owners or managers in SME (Small or Medium-Sized Enterprise) B2B companies, located in the United Kingdom.

It will be concluded that the payment methods available to small businesses are sufficient for their needs, and there were no real ‘pain points’ with the actual payments themselves – and this is posited as one reason why payment services innovation has been limited within B2Bs. However, each business experienced a number of challenges in the bigger-picture payment cycle and business purchasing flow. It is within this space – helping businesses manage payments, not make payments – that opportunities for innovation lie, and a conceptualisation of new business opportunities is discussed.

Keywords
B2B; Business to Business; SME; Small to medium-sized enterprises; Payment Services; Innovation; Needs analysis; Technology-Push/Needs-Pull; Late Payments; United Kingdom
Acknowledgements

Thank you to my supervisor Gregg Vanourek for his critical eye and comments on drafts of this work. Thank you also to Marte de Vries for your comments and opposition. Many thanks to those companies and individuals who were willing to be interviewed, and to my business contacts for putting me in touch with these companies.

Finally an immense thank you to my wife Elizabeth who made this thesis possible, and to Thomas for making it worthwhile.
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Abbreviations
<table>
<thead>
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<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BACS</td>
<td>“Bankers' Automated Clearing Services” – one of three UK methods to conduct a Direct Credit transaction.</td>
</tr>
<tr>
<td>CHAPS</td>
<td>“Clearing House Automated Payment System” – one of three UK methods to conduct a Direct Credit transaction. Used for high-value transactions</td>
</tr>
<tr>
<td>ECB</td>
<td>European Central Bank</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>FPS</td>
<td>“Faster Payments Scheme” – one of three UK methods to conduct a Direct Credit transaction.</td>
</tr>
<tr>
<td>NHS</td>
<td>UK National Health Service</td>
</tr>
<tr>
<td>PO</td>
<td>Purchase Order</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium-Sized Enterprise – a company with fewer than 250 staff</td>
</tr>
</tbody>
</table>
Glossary
Throughout this paper, the terms company, customer, business and individual are used often. There are a few specific meanings for these that should be made clear. Further, some finance specific terms are defined here.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>Broadly, the seller of the products or services (in this paper, all sellers are companies)</td>
</tr>
<tr>
<td>Customer</td>
<td>Broadly, the buyer of the products or services (an Individual or Business)</td>
</tr>
<tr>
<td>Business</td>
<td>A customer who is an organisation who buys products or services as part of running their business, or as a component of the products or services they sell</td>
</tr>
<tr>
<td>Individual</td>
<td>A customer who is a person that is buying products or services for their own use</td>
</tr>
<tr>
<td>Consumer</td>
<td>Term used interchangeably with ‘Individual’</td>
</tr>
<tr>
<td>B2B</td>
<td>Stands for ‘Business to Business’ - Transactions or sales between businesses</td>
</tr>
<tr>
<td>B2C</td>
<td>Stands for ‘Business to Consumer’ - Transactions or sales between a business and an individual</td>
</tr>
<tr>
<td>Cash</td>
<td>Physical currency, in either notes or coins</td>
</tr>
<tr>
<td>Cheque</td>
<td>Written promise to pay that is physically transferred to the recipient. The recipient then needs to take the cheque to their bank to be deposited into their account.</td>
</tr>
<tr>
<td>Credit Transfer</td>
<td>Bank to Bank transfer method. A recipient is nominated, and money is ‘pushed’ to that account.</td>
</tr>
<tr>
<td>Direct Debit</td>
<td>Bank to Bank transfer method that is the opposite of a Credit Transfer. A customer provides their authorisation and account details, and money is ‘pulled’ from their account when the recipient decides.</td>
</tr>
<tr>
<td>Payment Card</td>
<td>Payment Card is a common term for Debit Cards and Credit Cards. Payment Cards are usually physical plastic cards.</td>
</tr>
<tr>
<td>- Debit Card</td>
<td>Debit Cards are linked to a bank account and allow immediate spending of funds</td>
</tr>
<tr>
<td>- Credit Card</td>
<td>Credit Cards are similar to Debit Cards, but the balance of the amount spent does not need to be paid off immediately.</td>
</tr>
</tbody>
</table>
1 Introduction

In this section we consider a background of payment services, an overview of business-to-consumer vs business-to-business markets, and current innovations in payment services. Finally, we look at the research aims and delimitations of this study.

1.1 Introduction

Everything must be assessed in money; for this enables men always to exchange their services, and so makes society possible.

– Aristotle (384-322 BCE)

Companies and individuals buy and sell goods and services every day. All these items that are purchased requires payment, and there are many ways that payment can be made. Most commonly, payment can be made with Cash, Credit Card or Debit Card (together called Payment Cards), electronic bank transfer (payment sent from your bank account, hereafter called Credit Transfers), Direct Debit (payment pulled from your bank account), or with a Cheque (a written promise to pay money) (O’Mahony, Peirce and Tewari, 2002).

There are also different avenues through which you can buy or sell goods, ranging from purchasing goods or services in person (Physical Retail purchases), purchasing goods or services online (Online Retail purchases), to paying a supplier business based on their invoice (Pay-on-Invoice purchases) or on a recurring subscription basis (Subscription Payments) (Hove and Karimov, 2016; Geerling, 2018).

When looking at the buying selling relationship, companies usually focus on either selling primarily to individuals (known as Business-to-Consumer or B2C commerce) or on selling primarily to businesses (known as Business-to-Business or B2B commerce). When we compare the customer segments for B2C and B2B, we see that the customer profile, the customers’ needs, and the way the customers’ shop are all different – and consequently the payment methods and transaction types used by each segment differ. These differences and needs will be explored in more detail in Section 2.

In recent years, there have been a number of innovative payment companies that have grown in prominence and market share. Some notable examples of innovation in this sphere include ‘unicorn’ companies like Klarna, iZettle, Revolut, Square and PayPal. While these will be explored in detail in Section 2.6, a quick assessment reveals a key factor shared by all the mentioned companies is that they deal in the B2C side of payments, and most of them exclusively so. We see that the majority of successful innovation in payments has occurred in B2Cs, and the B2B segment has been left relatively devoid of successful innovations.

It is this area, innovation of payments in B2Bs, that this paper will explore and in particular in relation to smaller businesses. While definitions of the size of a small business vary, we will use the European Commission (2003) definition of Small and Medium-sized Enterprises (SMEs) as being those organisations with fewer than 250 staff. There are nearly 24 million SMEs in the European Union, and all of these companies need to order products and make payments. Unlike larger companies, these SMEs have less developed operations and processes, and fewer payment and automation solutions exist (Caluwaerts, 2010).
1.2 Research Question and Aims

In the payments industry, B2C merchants and B2B merchants operate in quite different environments. In recent years there have been significant innovation in the B2C area of the payments industry (Accenture, 2014), however minimal innovation has occurred in the B2B segment. The question must then be asked, when so much innovation is emerging in B2C consumer payments, [RQ1] Why are there limited successful innovations in B2B Payment Services? And furthermore [RQ2]: Are there any areas for innovation in the realm of B2B Payments?

We will explore the answers to these research questions by way of a series of in-depth semi-structured interviews with small B2B companies in the United Kingdom, and through the lens of the Technology-Push, Needs-Pull model. The aim of this research is to increase knowledge by exploring this perceived gap in innovation, to identify key challenges or ‘pain points’ (Leavy, 2018) faced by B2B SMEs, and to identify areas for future innovation in B2B payments.

This research will highlight some areas of future research for academics, but also aims to have value for practitioners by providing insight into B2B challenges and a conceptualisation of new business opportunities.

1.3 Delimitations

For the purposes of this discussion, we will keep our discussion geographically limited to the European Union (EU), with primary discussion focused on the United Kingdom. Furthermore the focus with remain on businesses, and in particular Small and Medium-Sized Enterprises. Therefore, payments in other areas such as Large Enterprise and Government are outside the scope of this paper.

Payments methods such as Mobile payments (M-payments), Digital cash, cryptocurrencies, and mobile wallets are not particularly relevant to the topic of study, as it a business focused paper and therefore these will not be discussed.

While this paper does seek to identify areas for potential innovation it will not actually attempt to assess or suggest possible innovations. That task will be left for the future researchers and practitioners.
2 Literature Review

In this section a brief background on available payment methods is presented, along with current statistics on the utilisation of these payment methods within the EU. We then look at where payments fit within the process flows of a business and existing innovations within the payments area. Finally, a theoretical framework of innovation is presented and described.

This literature review aims to explore the background to a number of relevant areas of research. Before considering future innovation, we need to understand the current status quo, so we will first review current methods of payment, such as Payment Cards, Credit Transfers and Direct Debit. We also look at some statistics on the breakdown in usage of these payment methods. Next, we look at how these payment methods are used to complete transactions in a variety of different avenues, such as Online Retail, Physical Retail, and Pay-On-Invoice, and these should be examined as innovation may occur in different transaction spaces. Up to this point, we have examined the payment market as a whole, however it is possible to partition this market by looking at the parties involved in the transaction – is it a company selling to another company (B2B), or is it a company selling to an individual (B2C)? This division is pertinent as the two types of businesses handle payments and interact with their customers in quite dissimilar ways, and these differences will be examined further. Upon review, it will be suggested that most recent successful payment innovations have occurred in the B2C segment of the market. Finally, the Technology-Push and Needs-Pull framework will be discussed, as this will help to give structure to the findings later in this paper.

2.1 Current Payment Methods

Before looking at future innovations in payments, it is useful to examine the existing payment methods available. Globally, there are five primary payment systems that facilitate almost all transactions made: Cash, Payment Cards (credit cards and debit cards), Credit Transfers, Direct Debits, and Cheques (O’Mahony, Peirce and Tewari, 2002; Peffers and Ma, 2003).

Each of these methods have varying pros and cons, including different levels of speed, security, vulnerability to fraud, and reversibility (Gillette and Walt, 2008). Cash is available in notes or coins of various denominations, and is backed by a country’s government and their central bank. Cash is instant and irreversible, but vulnerable to theft, and must be physically exchanged in person.

Payment Cards include credit cards and debit cards, and are physical cards connected to a bank account, allowing direct access to funds. With a debit card, when a transaction is made the money is immediately debited from the account, whereas with a credit card the amount spent does not need to be paid in full immediately. Payment Cards are fast and provide immediate confirmation of the transaction, but are vulnerable to fraud and security issues, and transactions are reversible (O’Mahony, Peirce and Tewari, 2002; Gillette and Walt, 2008).

Credit Transfers are bank to bank transfers, initiated usually online, by telephone or in a bank branch. The sender nominates the recipient’s bank account and the amount to send, and the money is sent (or ‘pushed’) to the recipient’s account. Credit Transfers vary in speed, but are usually quite slow (often 1-3 business days), and do not specifically provide confirmation of the recipient’s details, so mis-directed payments are possible. They are less vulnerable to
fraud and security issues and are usually not reversible (O’Mahony, Peirce and Tewari, 2002; Gillette and Walt, 2008).

Direct Debits are also bank to bank transfers, but instead of the payment being initiated by the sender, it is initiated by the recipient. After one-time authorisation is received, money is ‘pulled’ from the sending bank account on a timetable determined by the recipient. Direct Debits can also be slow (1-3 business days), but are secure and not vulnerable to fraud. Payments are not able to be mis-directed, but the recipient could request more money than is owed – due to this power imbalance these transactions are reversible and have good consumer protections (O’Mahony, Peirce and Tewari, 2002; Gillette and Walt, 2008).

Finally, Cheques are a written ‘promise to pay’ that needs to be physically deposited at the recipient’s bank. Cheques are very slow (both in clearing time, and in elapsed transit or postal time) with cheque clearing taking 3-5 business days. Availability of funds isn’t checked until the cheque is cleared, which means it is possible to write cheques when there is no money in the underlying bank account. Cheques are vulnerable to fraud, and can be ‘stopped’ by the sender after it has been written (O’Mahony, Peirce and Tewari, 2002; Gillette and Walt, 2008).

Table 1: Five primary Payment Methods (in order of presentation)

<table>
<thead>
<tr>
<th>Payment Methods</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>Physical currency, in either notes or coins.</td>
</tr>
<tr>
<td>Payment Card</td>
<td>Payment Card is a common term for Credit Cards and Debit Cards. Debit Cards are linked to a bank account and allow immediate spending of funds. Credit Cards are similar to Debit Cards, but the balance of the amount spent does not need to be paid off immediately.</td>
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<tr>
<td>Credit Transfer</td>
<td>Bank to Bank transfer method. A recipient is nominated, and money is ‘pushed’ to that account.</td>
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</tr>
<tr>
<td>Cheque</td>
<td>Written promise to pay that is physically transferred to the recipient. The recipient then needs to take the cheque to their bank to be deposited into their account.</td>
</tr>
</tbody>
</table>

2.1.1 Credit Transfer schemes in the United Kingdom

In the UK there are three separate schemes that can be used to make a Credit Transfer (Milne, 2007; Greene et al., 2014):

- BACS (Bankers’ Automated Clearing Services) Direct Credit,
- CHAPS (Clearing House Automated Payment System), and
- Faster Payments Scheme.
All three schemes are Credit Transfers that can be initiated online, by phone or in a bank branch, but they differ in terms of speed of transfers, limits on the maximum amount that can be sent, and the cost of the transfer. These three methods will be described further below.

BACS transfers take three business days to arrive in the recipient’s account, but are usually free or cheap (approximately £0.20), and the transaction value limit is high (only limited by bank or account limits). CHAPS payments are same-day, but are relatively expensive (approximately £20-£30 per transaction) - CHAPS is intended for making high-value transactions (such as for property sales) with guaranteed payment the same business day. Faster Payments Scheme is the newest scheme (introduced in 2008), and transfers under FPS are near-instant, taking a few seconds – or at worst case up to 2 hours. Transactions are limited to £250,000, and the cost per transaction are quite cheap, but slightly higher than BACS (e.g. £0.35 for FPS compared to £0.18 for BACS at Royal Bank of Scotland (2017), or £0.70 for FPS compared to £0.10 for BACS at Danske Bank UK (2015)).

2.2 Payment and Transaction Statistics

Within the EU in 2016, the total number of non-cash transactions was 122 billion transactions annually – an increase from 2015 of 8.5% (European Central Bank, 2017a). The breakdown of these transactions saw that card payments accounted for 49% of all transactions made, credit transfers accounted for 25%, direct debit accounted for 20% and cheques accounted for 2.5% (see Figure 1).

Looking at just the UK for the same period (2016), the breakdown of transactions is similar but slightly different. Card payments accounted for 65% of transactions made, credit transfers accounted for 17%, direct debit accounted for 16% and cheques accounted for 1.9% (European Central Bank, 2017a). From an initial review of total volume of transactions, it appears that credit transfers and direct debits are relatively minor players, heavily outweighed by payment cards.

Figure 1: Use of the main payment methods in the EU (Billions of Transactions per year)
Source: European Central Bank (2017b, p. 2)
When we dig deeper into the data however and look at value of transactions instead of volume of transactions, a completely different picture emerges. We see that upwards of 90% of all money moved in the EU and in the UK was transferred by Credit Transfers, compared with 1% of money transferred by Payment Card. In the UK, the average transaction value was €23,630 (£19,376) for a Credit Transfer transaction compared with the average transaction value of €67 (£54) for a Payment Card transaction (European Central Bank, 2017a). This can be seen clearly by looking at Table 2 and Table 3 below, showing the breakdown of different payment methods by both number of transactions as well as value of transactions, along with the relative importance of each as a percentage.

Table 2: Payment Statistics for the whole of the EU, 2016 Source: European Central Bank (2017a) and author’s own calculations

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Credit Transfers</th>
<th>Direct Debits</th>
<th>Payment Card</th>
<th>Cheques</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Transactions</strong> (in Millions)</td>
<td>122,230</td>
<td>30,639</td>
<td>24,852</td>
<td>59,648</td>
<td>3,025</td>
</tr>
<tr>
<td><strong>Relative Importance</strong> (as % of Transaction Volume)</td>
<td>100%</td>
<td>25.10%</td>
<td>20.40%</td>
<td>48.90%</td>
<td>2.50%</td>
</tr>
<tr>
<td><strong>Value of Transactions</strong> (in Millions)</td>
<td>€280,373,100</td>
<td>€262,517,100</td>
<td>€8,644,500</td>
<td>€2,919,600</td>
<td>€3,103,100</td>
</tr>
<tr>
<td><strong>Relative Importance</strong> (as % of Transaction Value)</td>
<td>100%</td>
<td>93.63%</td>
<td>3.05%</td>
<td>1.04%</td>
<td>1.14%</td>
</tr>
<tr>
<td><strong>Average Value per Transaction</strong></td>
<td>€2,294</td>
<td>€8,568</td>
<td>€348</td>
<td>€49</td>
<td>€1,026</td>
</tr>
</tbody>
</table>

Table 3: Payment Statistics for the UK, 2016 Source: European Central Bank (2017a) and author’s own calculations

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Credit Transfers</th>
<th>Direct Debits</th>
<th>Payment Card</th>
<th>Cheques</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Transactions</strong> (in Millions)</td>
<td>25,154</td>
<td>4,233</td>
<td>4,072</td>
<td>16,372</td>
<td>477</td>
</tr>
<tr>
<td><strong>Relative Importance</strong> (as % of Transaction Volume)</td>
<td>100%</td>
<td>16.80%</td>
<td>16.20%</td>
<td>65.10%</td>
<td>1.90%</td>
</tr>
<tr>
<td><strong>Value of Transactions</strong> (in Millions)</td>
<td>€103,428,600</td>
<td>€100,031,400</td>
<td>€1,540,300</td>
<td>€1,095,400</td>
<td>€761,500</td>
</tr>
<tr>
<td><strong>Relative Importance</strong> (as % of Transaction Value)</td>
<td>100%</td>
<td>96.72%</td>
<td>1.49%</td>
<td>1.06%</td>
<td>0.74%</td>
</tr>
<tr>
<td><strong>Average Value per Transaction</strong></td>
<td>€4,112</td>
<td>€23,630</td>
<td>€378</td>
<td>€67</td>
<td>€1,596</td>
</tr>
</tbody>
</table>

While looking at the UK data, we see an overwhelming majority of the value transferred was moved by Credit Transfer (96%). It is noteworthy to break down this Credit Transfers total and to look at the contributions from each of the three component schemes described in Section 2.1.1 (BACS, CHAPS and FPS). We see that there were an overall total of 4.2 billion Credit Transfer transactions and €100 trillion Euros transferred. Of this overall total, CHAPS payments (being wholesale and bulk payments) accounted for just 0.5% of the number of transactions, but accounted for 92% of the value transferred (€92 trillion Euros). The majority of CHAPS transactions are related to “bank to bank or bank to corporate transactions” (Committee on Payment and Settlement Systems, 2012, p. 452), and are unlikely to be a fair
representation of individual or small business activity. By re-tabulating the data to exclude those bulk transactions, we would hope to see a truer picture of payment method activity for SMEs and individuals. Table 4 (below) shows the resultant breakdown of payment methods excluding the CHAPS bulk payments – that is, Credit Transfers (for BACS and Faster Payments only), Direct Debits, Payment Card and Cheques.

**Table 4: Adjusted Payment Statistics for the UK (Excluding Wholesale CHAPS Transactions), 2016**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Credit Transfers (Excl CHAPS)</th>
<th>Direct Debits</th>
<th>Payment Card</th>
<th>Cheques</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Transactions</strong> (in Millions)</td>
<td>24,494</td>
<td>3,573</td>
<td>4,072</td>
<td>16,372</td>
<td>477</td>
</tr>
<tr>
<td><strong>Value of Transactions</strong> (in Millions of EUR)</td>
<td>€9,131,968</td>
<td>€5,735,757</td>
<td>€1,539,311</td>
<td>€1,095,400</td>
<td>€761,500</td>
</tr>
<tr>
<td><strong>Value of Transactions</strong> (in Millions of GBP)</td>
<td>£7,488,214</td>
<td>£4,703,321</td>
<td>£1,262,235</td>
<td>£898,228</td>
<td>£624,430</td>
</tr>
<tr>
<td><strong>Relative Importance</strong> (as % of Transaction Value)</td>
<td>100%</td>
<td>14.59%</td>
<td>16.62%</td>
<td>66.84%</td>
<td>1.95%</td>
</tr>
<tr>
<td><strong>Average Value per Transaction (EUR)</strong></td>
<td>€373</td>
<td>€1,605</td>
<td>€378</td>
<td>€67</td>
<td>€1,596</td>
</tr>
<tr>
<td><strong>Average Value per Transaction (GBP)</strong></td>
<td>£306</td>
<td>£1,316</td>
<td>£310</td>
<td>£55</td>
<td>£1,309</td>
</tr>
</tbody>
</table>

From this, we can now see that a much lower amount of money has been transferred (€9.1 trillion Euros compared with €103.4 trillion Euros), which changes the relative importance of Credit Transfers in comparison to Direct Debits, Payment Cards and Cheques. Credit Transfers now account for 62% of all value transferred (down from 96%, Direct Debits now account for 16% of all value transferred (up from 1.5%), Payment Cards now account for 12% of all value transferred (up from 1%) and Cheques now account for 8% of all value transferred (up from 0.7%).

### 2.3 Payment Transaction Types

Payment transactions occur in a range of avenues, both online and offline. In order to look at innovation in payments it’s important to firstly understand the different types of transactions that are used, and which parties are involved in the transaction.

The primary transactions we will look at include payments made from one person to another person (i.e. “Peer to Peer” payments (Geerling, 2018)); purchasing goods or services in person (i.e. “Physical Retail” (Geerling, 2018)); purchasing goods or services online (i.e. “Online Retail” (Geerling, 2018)); paying a supplier based on their invoice (i.e. “Pay-on-Invoice” payments (Hove and Karimov, 2016)) and recurring subscription services (i.e. “Subscription” payments (Accenture, 2014)). These transaction types are summarised in
Table 5 below.

Each of these styles of payments have different requirements and different challenges. For Peer to Peer payments, as it is important that payments are instant or near-instant and have low transaction overheads and costs, cash is still favoured as the preferred method (O’Mahony, Peirce and Tewari, 2002). For physical retail payments, the merchant is likely to have some infrastructure in place to process payments, and individuals can pay with cash or credit and debit payment cards. The risk of fraud is lower as the payment card is present and secured with Chip, PIN or Signature, and the merchant can afford to wait for a few days for the payment to settle (Hove and Karimov, 2016).

For online retail payments, cash is not a viable option, but payments can be made with credit or debit Payment Cards, with a Credit Transfer, or with a Direct Debit from the customer’s bank. With Payment Card transactions, the risk of fraud is higher for the merchant as the card is not present, but this is the preferred payment method for this transaction type as it provides (effectively) instantaneous payment confirmation (Hove and Karimov, 2016). Methods such as bank transfers are possible and have lower risk, but they have more overhead for the customer to be able to make a payment, and often have a longer transfer and reconciliation time before the payment is confirmed and the order can be processed (Zuora and Weber, no date). Pull payments via Direct Debit are also possible, but need more approvals and setup steps - and this overhead means they are usually not suitable for one-off purchases.

For Pay-on-Invoice payments, an invoice or payment request is sent to the customer, and payments are usually made by Credit Transfer or possibly by cheque. Invoices are often sent by merchants with lower levels of payment infrastructure as it avoids the need to support payment cards and pay the related fees, or by merchants who extend credit terms to their customers.

Credit terms, or trade credit, is the practice of allowing your customer to receive goods or services in advance of being paid. This is offered for a variety of reasons, but one main reason is that it gives the customer a chance to review the work done or goods received for completeness and quality. Another reason can be that the customer will not do business with a supplier that does not extend them credit, so they offer it to remain competitive (Paul and Boden, 2011; Boden and Yassia Paul, 2014). Trade credit is very commonly used in the UK, where greater than 80 per cent of business-to-business transactions are on credit (Paul and Boden, 2011).

Finally, Subscription services cover recurring payments, generally for the same amount each billing cycle, and these payments are usually set up by the merchant as pull payments via Direct Debits or recurring Payment Card authorisation. The risk profile is lower as there is an ongoing relationship between the customer and merchant, and the longer-term nature of the relationship makes the overhead of setting up pull payments worthwhile (Zuora and Weber, no date).
Table 5: Classification of Payment Transaction Types

<table>
<thead>
<tr>
<th>Transaction Types</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person-to-Person payments</td>
<td>Payments made between individuals</td>
</tr>
<tr>
<td>Physical Retail payments</td>
<td>Payments made in-person in a retail environment, such as a shop or other point of sale</td>
</tr>
<tr>
<td>Online Retail payments</td>
<td>Payments made via a desktop or mobile device to a website or web shop</td>
</tr>
<tr>
<td>Pay-on-Invoice payments</td>
<td>Payment made in response to a received invoice</td>
</tr>
<tr>
<td>Subscription payments</td>
<td>Payment made on an automated recurring basis, with limited interaction</td>
</tr>
</tbody>
</table>

Individuals primarily use Peer-to-Peer, Physical Retail, and Online Retail transaction types, whereas businesses predominantly use Pay-on-Invoice and Recurring Payments (Böhle, 2002). It is also possible for businesses to use Physical Retail and Online Retail; however this is less common.

2.4 Overview of B2C and B2B markets

While B2C and B2B transactions and markets superficially appear quite similar, there are many essential differences between them (Lilien, 2016). First and foremost, the basic characteristics of the B2C and B2B market segments are quite different. There is a much higher volume of Individuals than Businesses making purchases – in the EU alone there are 500 million citizens who use the internet (Ecommerce Europe, 2016) and 24 million businesses (Muller et al., 2017), which is a ratio of approximately 20:1 of individuals to businesses. There is a higher volume of transactions for Individuals (although each transaction has a relatively low value) compared with a lesser volume of Business transactions with a higher transaction value (Davis, 2013; Deloitte Australia, 2018).

The relationship between buyer and seller is also quite distinctive between the two market segments. Individuals have a short-term, transactional-style relationship with the merchant, and are often purchasing more commoditised products that are available from multiple merchants (EmergeApp and Hegde, no date). This means that the relationship and choice of merchant focuses on concrete comparable attributes like price, stock availability, delivery time and delivery cost, as well as on less explicit factors like usability of the merchant’s website, choice of payment methods and ease of payment. As there usually is no existing or ongoing relationship between the individual and the merchant, no credit terms would be extended, and payment would be expected prior to shipping any goods.

On the other hand, companies usually have a longer-term, more relationship-focused association with their suppliers. They generally purchase products or services that are more customised or distinctive and which are available from fewer merchants. Alternatively they order similar products repeatedly, and therefore generally have a number of regular recurring suppliers (Robinson, 2017). The relationship and choice of merchant is usually made based on
less-explicit factors like the range of products offered, existing relationships, or credit terms, and is often not focused on pricing of specific items, usability of website, choice of payment methods or ease of payment (Bose, 2016). Companies also usually expect – and are offered – credit terms, allowing them to pay perhaps 30 days after the goods have been delivered (Wilson, 2008; Boden and Yassia Paul, 2014).

When making the decision to buy, individuals are more likely to make these purchasing decisions based on emotions, and based on their wants and desires (Bose, 2016). Few people are involved in the purchase decision, and a higher proportion of purchases are likely to be impulsive purchases. Generally speaking, individuals value quicker payments and ease of ordering, and are more willing to trial or adopt innovative options for payments (Bridges, Goldsmith and Hofacker, 2005). As mentioned above, individuals generally conduct a higher number of low-value transactions, and give more consideration to per-transaction costs or overheads like transaction fees and shipping charges. Individuals are concerned with fast payments and fast payment confirmation, as the faster the transaction is confirmed, the faster the order can be processed, and the desired goods can be shipped.

For businesses, purchasing decisions are more planned and logical, and are based on “satisfying derived demand” (Grewal et al., 2015, p. 193) – that is, a business makes a purchase to fulfil the needs of their customers. These purchases are often larger and cost more money, and – as the risk of making a poor choice is higher – multiple people are therefore involved in the purchasing and approval process (Bose, 2016). As purchases in a business need to go through certain steps and processes, they value traceability, approval processes and control over payments, and there is less willingness to trial or adopt innovative payment options. Companies are not as concerned about faster payment methods as they usually operate with trade credit, and don’t need to pay for goods or services up front.

Once the buying decision has been made, the steps involved in completing the purchase also differ between B2Cs and B2Bs. On the individual side, there are generally very few people involved in the purchase decision and payment processing, and payment is most commonly made in advance of receiving the goods or service. Any credit is provided by a third party such as through a credit card, and not directly with the merchant (Apruve and Osborn, 2017).

Businesses often have more complex payment processes and requirements. Once a purchase decision is made, a number of different people are involved to approve the purchase, to process the order, complete the payment, and to record all of these steps in the appropriate business systems. Businesses often pay in arrears or after delivery of goods, and often credit terms of flexible payment options are provided by the merchant. Throughout this process, visibility and oversight is very important, and businesses are willing to forego faster payment methods like credit cards, and will deal with the overhead and manual processing steps to use bank transfers or cheques. Further, businesses may have specific ordering processes that disallow online ordering using a credit card (for example they may require sending a Paper or Emailed Purchase Order, or may have tender or other supplier approval processes to follow), or they may expect credit terms from the supplier (Apruve, 2017).
2.5 Payments and the Business Purchasing Flow

As was discussed in the preceding section, the process of purchasing goods or services for a company compared to for an individual are quite different. When we look at a purchase from a commercial context, we see that the payment itself is just one part of the interaction between buyer and seller. A purchase of goods or services contains the following basic stages (when credit terms are offered): ordering of goods, delivery of goods, invoicing for items and payment of invoice (Bertelè and Rangone, 2008; Caluwaerts, 2010). These stages can be seen in Figure 2.

*Figure 2: Steps involved in Purchasing for a company. Source: Bertelè and Rangone (2008, p. 14)*

The sequence of these stages may change depending on whether there is an existing credit terms arrangement between the parties – if no credit terms exist then the invoice and payment stages would come before the delivery of goods stage. See Figure 3 for a side by side view of the order of the steps.
The ordering of goods stage requires several manual steps. Once a supplier is identified, a list of all goods or services to be ordered and the quantities is sent to the supplier – this is printed and posted, emailed, entered on a web portal or transferred electronically through Electronic Data Interchange (EDI) systems (Keifer, 2010). Often, this list of goods or services needs to be formalised on a Purchase Order, which is a promise to the supplier to purchase the items listed. The Purchase Order is important for both parties as it makes explicit the purchasing agreement: it makes clear what items will be purchased and at what price, and it gives the supplier certainty that they will get paid for the items (EMSFEI, 2016). There are a number of approval steps to the process of raising a Purchase Order to ensure that products are not ordered without authorisation, and to ensure that budget is allocated to the purchase. Smaller customers often will not raise a purchase order, but may just receive a quote or proposal from the supplier detailing items and costs and sign and accept the quote as indication of their commitment to purchase.

The delivery of goods stage is fairly straightforward – the goods are delivered from the supplier to the customer, and the customer receives those goods into their office or warehouse and confirms all items have been received.

The invoicing stage is more complicated and involves more steps. Following on from the delivery, the supplier confirms that the work is completed, or goods are delivered as per received purchase order, and whether there have been any changes to the order or pricing since the purchase order was received. The supplier then prepare an invoice in their finance or accounting system with correct line item details and costs, and delivers the invoice – it is either printed and posted, emailed or transferred electronically through an e-invoicing or EDI system (Cotteleer, Cotteleer and Prochnow, 2007).

Finally, in the payment stage, the customer receives the invoice and confirms that the work was completed, or the goods were delivered. Next, they confirm that the invoice items, quantities and values match the sent purchase order, or if there is a variation (or if there is no purchase order) the invoice may be routed internally to get approved. Once approved, the
invoice is entered into their finance or accounting system, and payment is scheduled to be made through their bank. The customer may optionally send a ‘payment advice’ or confirmation that payment has been made to the supplier. The supplier then identifies a new payment in their bank account (or receives a payment advice) and matches up the payment in their bank account to the invoice in their accounting system, and marks the invoice as paid (Turban et al., 2017).

As we can see, unlike for a purchase made by an individual, within a business there are many steps involved with ordering and purchasing goods and services, and many of these steps are in the surrounding processes – beyond the actual sending of the payment.

This entire invoicing process is also costly for both parties - according to research from Helsinki School of Economics (Penttinen, 2008), the combined cost of sending and receiving an invoice can be up to €47 for a paper invoice. With automation of invoicing processes, this cost can reduce to €29 for semi-automated systems, and can reduce to as low as €14 with full e-invoicing automation.

2.6 Existing Innovations in Payment Services

Within the realm of Payment Services, there have been a number of innovative payment companies over the past few years that have grown in prominence and market share, and that have created quite successful innovative solutions. Many of these successful innovative companies have dealt predominantly with the B2C side of payments, and very few successful companies have dealt with the B2B side. If we assume company success and company valuation are positively correlated, then we can look at some companies with high valuations as examples of successful companies. We will look therefore at five companies that operate in the B2C sector that are defined as ‘unicorns’ (Brown and Wiles, 2015), that is companies with a valuation of greater than $1 billion US dollars. The companies are Klarna, iZettle, Square, PayPal and Revolut. We will see that there has been a large amount of innovation in Online Retail and Physical Retail in particular – two areas predominantly used by B2C.

Klarna (Sweden, founded 2005) operates in the Online Retail domain, and offers simplified online shopping checkout solutions and easier payment methods (including Pay-on-Invoice, Direct Debit or Payment Cards), as well as offering consumer credit and splitting payments over a 6- to 36-month term. Klarna has a valuation of $2.5 billion US dollars and has around 2000 employees.

iZettle (Sweden, founded 2010) operates in the Physical Retail domain, and offers small companies portable Payment Card terminals connected to a mobile phone or tablet, giving SMEs the ability to accept credit card or debit card payments. iZettle has a valuation of $1.1 billion US dollars and has around 200 employees.

Square (United States, founded 2009) operates in the Physical Retail domain, and is very similar to iZettle. Focused on the US market, Square also offers portable Payment Card terminals connected to a phone or tablet to allow acceptance of credit cards or debit cards. Square has a valuation of $17 billion US dollars and has around 2300 employees.
PayPal (United States, founded 1998) operates in the Online Retail and Peer to Peer domains, and primarily offers an online wallet service that can be used to purchase goods on websites or to transfer money between individuals. The wallet can be loaded from a credit card, debit card or bank account. PayPal has a valuation of $88 billion US dollars and has around 18,700 employees.

Revolut (United Kingdom, founded 2015) operates in the Physical Retail and Online Retail domains, and offers a multi-currency online wallet service with a connected Physical or Virtual Debit Card, and offers no-fee international currency conversions. The wallet can be loaded from a credit card, debit card or bank account. Revolut has a valuation of $1.7 billion US dollars and has around 350 employees.

As best as can be discerned, there are currently no B2B-focused unicorns in the Payment Services field. Nonetheless, one of the larger firms with a B2B focus is GoCardless who are based in the United Kingdom – a company that processes Direct Debits for its customers. GoCardless currently has a valuation around $250 million US dollars, which is much lower than the other firms discussed on the B2C side (ranging from $1.1 billion to $88 billion).

According to data from the US Department of Commerce, in 2010 there was $4.13 trillion US dollars of ecommerce sales in the US – of this total, B2B sales made up almost 90% ($3.7 trillion US dollars), and B2C sales made up just 10% ($424 billion US dollars) (Lilien, 2016). Given this imbalance in favour of B2B, it is surprising to see the concentration of successful innovative companies in the B2C sphere, and limited successful companies on the B2B side.

Moving beyond B2B and B2C, there has also been some innovation recently in both the regulatory realm and in the banking infrastructure realm. On the regulatory side, in the EU this year, the Second Payment Services Directive (PSD2) came into law which requires banks to open-up access to their systems and to customer data, and to implement and common data interfaces and improved security. On the banking infrastructure side, there have been recent advances in the development of infrastructure to support real-time Credit Transfers. In the United Kingdom, real-time Credit Transfers have been delivered over the past ten years through the Faster Payments Scheme. Subsequently, the EU has launched the SEPA Instant Credit Transfer scheme in 2017 and this scheme will offer instant payments across borders within the EU.

These various regulatory and banking infrastructure innovations predominantly offer a platform and framework for other solutions or offerings to be built upon, and these enable future innovation in many areas.

2.7 Small and Medium-Sized Enterprises

Throughout this research, we will be focussing on innovation and opportunities in smaller businesses. The definitions of what constitutes a small or a medium sized business varies across the world. In this paper we utilise the criteria from the European Commission to define company size (European Commission, 2003). The Commission Recommendation (2003) defines Small and Medium-sized Enterprises (SMEs) to be those organisations with fewer than 250 total staff. This category is then segmented further and separated into Micro businesses
Innovation in Business to Business Payment Services: a contextual approach to future innovation
David Jackson

(with fewer than 10 staff), Small businesses (with between 11 and 50 staff) or Medium-sized businesses (with between 51 and 250 staff).

Within the European Union, there are more than 23 million businesses, and of these, 99.8% are Small or Medium-Sized Enterprises – which account for two thirds of all employment and generate 56% of all total added value from the business sector (Muller et al., 2017). We can see that large firms make up the remaining 0.2% of companies (just 45,000 companies) and have a lion’s share of total value added and number of employees. These large companies face entirely different challenges and pressures than small businesses, and have sufficient capital to optimise business operations including ordering and making payments. Many solutions exist that target these small number of companies, but these enterprise solutions are not suitable for the SME market due to their high costs, complexity and integration effort required (Sandberg, Wahlberg and Pan, 2009). Instead we are focusing on the numerous smaller companies who still need to order products and make payments – but have less developed operations and processes, and for whom fewer solutions exist (Caluwaerts, 2010).

2.8 Framework: Technology-Push, Needs-Pull Model

Innovation is the translation of an invention or idea, and turning it into a product or service that creates value (Auerswald and Branscomb, 2003). There are many models that have been developed to assist in the understanding and management of the innovation process, and in this paper we will utilise the Technology-Push, Needs-Pull Model (Voss, 1984) to help identify areas where potential innovations could deliver value.

The Technology-Push, Needs-Pull Model describes two interrelated linear models of innovation. The concept of ‘Technology-Push’ (also known as ‘Discovery-Push’) had it’s beginning in the late 1940’s with the development of a linear model of innovation (Voss, 1984; Godin and Lane, 2013). This model proposed that innovation begins first with basic scientific research and a new discovery (or invention of a new technology), which then proceeds to development, and then production and diffusion of that innovation (Munro and Noori, 1988; Godin, 2006). This model aligns with Schumpeter’s (1942) first theory of entrepreneurship, who said “the function of entrepreneurs is to reform or revolutionize the pattern of production by exploiting an invention or, more generally, an untried technological possibility” (Schumpeter, 1942, p. 132). In essence, a new invention or technology is developed into a product, and then a market is sought for that product. Technology-Push flourished during the 20 years or so after the Second World War in a time with a great amount of industrial development and growth (Rothwell, 1994), and this model reflected the prevailing attitudes towards innovation and growth in society.

Technology-Push was the predominant model of innovation for many years until the mid-1960s (Rothwell, 1994; Godin and Lane, 2013), when a second-generation innovation model emerged that began looking at the demand perspective for innovations, rather than purely from the supply perspective. This model is commonly known as ‘Needs-Pull’, but is also known by various other names including ‘Demand-Pull’ and ‘Market-Pull’. This model posits that the needs or demands of individuals or the market are the driving force behind innovation, and technologies or solutions are sought to address that need.
Through meta-analyses of innovations within many organisations, Langrish (1972) and Utterback (1974) showed that approximately 70% of important innovations in a variety of fields were in response to market needs or demands – with the remaining 30% due to new technological or scientific advances (Utterback, 1974). These findings made clear the importance of being aware of the needs of the market and customers as the source of ideas for directing research efforts, and not just looking for new technologies to leverage. Further, as well as there being a majority of innovations utilising Needs-Pull, Zmud (1984) also found that “Generally, 'need-pull' innovations have been found to be characterized by higher probabilities for commercial success than have 'technology-push' innovations” (Zmud, 1984, p. 728).

There have been a number of criticisms of the Technology-Push and the Needs-Pull models. Technology-Push was seen as a process for creating technological inventions, but with no regard to turning them into innovations. The Needs-Pull model, which was meant to address the lack of market-focus in Technology-Push model has been criticised for failing to prove that “needs [...] are the prime movers of innovative activity” (Dosi, 1982, p. 150). Needs-Pull has also been criticised as being susceptible to getting ‘distracted’ by minor needs and only delivering incremental innovations (Brem and Voigt, 2009), and that “demand explains incremental technological change far better than it does discontinuous change, so it fails to account for the most important innovations (Mowery and Rosenberg, 1979; Walsh, 1984)” (Nemet, 2009, p. 701).

Both Technology-Push and Needs-Pull models have been criticised for being linear and for being an “approximation”, “an ideal representation”, “oversimplified” or “arbitrary and unrealistic” (Godin, 2015, p. 580). Burgelman and Sayles (1986) also summarised some deficiencies of both approach, included here in Table 6.

Table 6: Summary of deficiencies and shortcomings of technology push and market pull Source: (Burgelman and Sayles, 1986, p. 43)

<table>
<thead>
<tr>
<th>Technology Push</th>
<th>Market Pull</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk of starting with what can be researched and evaluated easily</td>
<td>Risk of looking only at needs that are easily identified but with minor potential</td>
</tr>
<tr>
<td>Risk of addressing the needs of the atypical user</td>
<td>Continuing to change the definition of the ‘opportunity’; ‘miss the opportunity’</td>
</tr>
<tr>
<td>Potential for getting locked into one technical solution</td>
<td></td>
</tr>
</tbody>
</table>

Despite the shortcomings in these two models when considered individually, a number of researchers in the 1970s and 1980s identified that while neither model in isolation was sufficient, the combination of the two models linked together allowed for innovation to occur (Mowery and Rosenberg, 1979; Langrish, 1980). This combination model was called the “Coupling model” (Rothwell, 1992) or the “Interactive model” (Rothwell and Zegveld, 1985) and was described as a sequential but not necessarily continuous process (Rothwell and...
Zegveld, 1985). In a survey of innovations, it was found that “successful innovations showed the ability to connect, or “couple” a technical opportunity with a market opportunity” (Nemet, 2009, p. 701).

Burgelman and Sayles (1986) extended this model by described an approach of looking at both the technology and the need, but doing so in the context of corporate need (that is, problems that are ‘relevant’ to a firm), and particularly looking at the linkages between all three elements. Burgelman and Sayles titled these three key concepts ‘Technology Sources’ (Technology-Push), ‘Market Demand’ (Needs-Pull) and ‘Relevant Problems’ (company alignment) (Burgelman and Sayles, 1986). While the original Coupling model describes linking the technology and the need, Burgelman and Sayles (1986) instead describe the importance of double-linking – making connections between the Relevant Problems, the Technology Sources and the Market Demand. Some examples of these three elements are included in Table 7.

Table 7: Extract “Three Elements Requiring Linkage” (Burgelman and Sayles, 1986, p. 44)

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevant ‘Problems’</td>
<td>Technology Sources</td>
<td>Market Demand</td>
</tr>
<tr>
<td>As defined by top management’s professed “interests”</td>
<td>Researcher’s personal interests</td>
<td>Marketer’s personal search</td>
</tr>
<tr>
<td>Problems of operating divisions</td>
<td>Existing corporate expertise</td>
<td>Areas of customer dissatisfaction</td>
</tr>
<tr>
<td>New opportunities created by external events</td>
<td>New technological developments</td>
<td>Potential for new need satisfaction</td>
</tr>
</tbody>
</table>

Further generations of innovation processes have been identified beyond Technology-Push and Needs-Pull and the Coupling model (Rothwell, 1994) which focus on planning and organisation structures within organisations to enable innovation. While these models are important when looking at the search for – or the implementation of – a potential innovation from the viewpoint/standpoint of an existing firm, they are not useful when assessing potential innovations that may exist. For that reason, our discourse will focus only on Technology-Push and Needs-Pull, and will use these two models to categorise and assess areas of potential innovation.
3 Methodology

In this section the chosen methodological approach used for this research is presented. We first review the research paradigm and research approach, then look at the collection of data. Finally, we look at any ethical and sustainability concerns of the research.

3.1 Research Paradigm

All research is conducted within a research paradigm that frames and influences how knowledge is studied and interpreted, and subsequently the choice of data collection and analysis methods. In this paper the interpretivist paradigm has been used as it is acknowledged that any research into inter-person and inter-company interactions is subjective and subject to bias. According to Saunders, Lewis and Thornhill (2009), there is too much complexity in the social world of management and business to be codified into ‘laws’, and instead it is “necessary for the researcher to understand the differences between humans in our role as social actors” (2009, p. 129). With an interpretivist paradigm, the researcher seeks to understand the world from the point of view of the research subjects and to understand the subjective meanings motivating their actions. As the researcher is a part of what is being researched and given that we interpret the meaning in accordance with our own subjective set of meanings, it is important to remain cognizant of the fact that the findings made will be ‘biased and value-laden’ (Mackenzie and Kniepe, 2006; Saunders, Lewis and Thornhill, 2009; Collis and Hussey, 2014).

3.2 Research Approach

The data collection methods used in research are influenced by the research paradigm chosen (Mackenzie and Kniepe, 2006). It is most common for research within the interpretivist paradigm to predominantly use a qualitative approach to data collection methods, and for research within the positivist paradigm to predominantly use a quantitative approach to data collection methods. In this research qualitative data collection methods such as semi-structured interviews were used, and secondary background quantitative data from published sources was analysed. Further, cross-case analysis was utilised to draw out themes from across the different cases. A qualitative approach was more relevant as more information could be drawn out from a small sample and still provide some meaningful insights.

3.3 Classification of Research Approach

It is possible to categorise different types of research along four distinct axes (Collis and Hussey, 2014, p. 3):

- Purpose of the research: what was the reason the research was conducted? Is it Exploratory, Descriptive, Analytical or Predictive research?
- Process of the research: how was the data collected and analysed? Is it a Quantitative or Qualitative approach to the research?
- Logic of the research: does the reasoning move from general to specific, or from specific to general? Is it Deductive or Inductive research?
- Outcome of the research: what is the expected goal of the research? Is it Applied or Basic research?
This research had an exploratory purpose as there has been limited prior research into the field of payment innovation in small businesses, and this research was designed to identify patterns and ideas and gain insight for further studies. In line with this, the research was designed to collect and analyse any data in a qualitative manner. This research utilised inductive logic as it is through the observations of a small number of specific cases that broader theories or patterns are developed. Finally, this research has an applied outcome, as the findings are intended to be able to be understood and utilised by practitioners.

3.4 Collection of Data

To answer Research Question 1 (Why are there limited successful innovations in B2B Payment Services?), I wanted to find out if the current offerings and payment methods that were available were sufficient or insufficient, and this necessitated asking those businesses and customers affected. I initially considered seeking interviews with existing payment providers (such as Klarna, GoCardless, iZettle), but I considered that any findings would be one-sided and affected by selection bias, so this approach was discarded.

For this paper, qualitative in-depth semi-structured interviews were predominantly used, coupled with secondary research compiled from prior research and industry sources.

Primary research was collected through a series of semi-structured interviews with small businesses based in the United Kingdom. These companies were located through approaching personal and business contacts of the researcher (who were predominantly in IT Support and Consulting companies), and asking to be introduced to their clients.

Interviews were sought with 8 small businesses in the United Kingdom with approximately 10 to 30 staff, as this size of business is likely to have a sufficient number of customers and suppliers, and a non-trivial amount of complexity – while still being small enough that it was possible to get a fairly clear overview of the entire business by talking with one person. The criteria for selection was that the businesses interviewed should represent a range of industries; should predominantly offer services (i.e. not manufacturing) and should predominantly have businesses for clients (i.e. is a B2B company).

Interviews were conducted with 5 companies. As the researcher is based in Sweden, interviews were conducted by telephone due to distance and cost considerations. Conducting interviews by video was considered, but it was decided that it added too much complexity for the interviewee and was an unnecessary hurdle to participation. While the tools were available, requiring video restricts where an interviewee can be located for the interview, adds technical hurdles and restrictions, and would have likely consumed the limited interview time that was available with set up and technical troubleshooting.

The interviews were designed as semi-structured, and a list of key topics to be discussed in each interview and related questions was created (Saunders, Lewis and Thornhill, 2009). While the key topics would be addressed, the specific questions asked, and the order topics were addressed, was expected to vary from interview to interview as the flow of the conversation would differ. The interview questions were varied: open-ended questions were used to gather broad background information; specific probes and comparison questions were used when required to expand upon details of interest, and closed-ended questions
were used to find specific items of factual information, or when time was running short (Saunders, Lewis and Thornhill, 2009; Collis and Hussey, 2014). A full list of interview topics and question areas is available in Appendix 1.

Interviews were conducted by telephone, were recorded with the participants approval, and participants were given the option to opt-out at any time. Before the interview began, an overview of the topics to be covered was discussed. Interviews took between 20 minutes and 1 hour, with a median duration of 40 minutes.

3.5 Ethics and Sustainability

When conducting research that involves people, it is always important to consider any ethical implications. In the case of this research the ethical issues are fairly limited, as the research was impersonal and there were no physical safety issues as all interviews were conducted by phone. Notwithstanding, a number of ethical considerations were still taken into account during the research and interview design process. In terms of privacy, permission to contact potential interviewees was sought through mutual business contacts before any initial contact was made by the researcher. Prior to seeking consenting to be interviewed, the purpose of the study was described. Anonymity of company identity was ensured, and great care was taken to maintain that. Personal questions were not asked, and interviewees were given the option to withdraw from the interview at any stage throughout the process. Before commencing the interviews, the subject matter and purpose of the research was clearly outlined. Consent to the interview process was granted by each subject, as was permission to record the interviews for later review. Access to the recordings is limited to only the researcher, and these recordings will be deleted after the research is completed. All these considerations were undertaken in order to maintain the ethical standards of this research.

It is of course essential in terms of ethics to ensure that when other people’s ideas or research are used that these are acknowledged and referenced appropriately. Every effort has been made to this in this paper with careful quoting and referencing throughout.

It is possible to look at sustainability from the aspect of sustainable research processes as well as sustainability implications from the outcome of the research. Taking the actual research first, all interviews were conducted over the phone saving the need for travel and energy spent there. Drafts and notes were made on the computer and only rarely was paper used throughout this process, and the final thesis will be published electronically only.

The results of this research offer promising outcomes for sustainability, as an increase in innovations would increase the volume of electronic payments and electronic invoicing. This would therefore reduce the need for printing and postage services, and the time and labour required to process invoices or go to a bank branch to cash a paper cheque. Furthermore, improvements in B2B payment processing would decrease costs and reduce time spent on inefficient payment processes such as double entry of bills. Another positive follow-on from this would be a reduction in staff costs and energy use, and hopefully a reduction in labour in chasing late payments. Overall, this research should provide numerous benefits for a more sustainable future.
4 Findings and Discussion

In this section the findings from the interviews will be reviewed. The five case companies will be considered, along with themes related to payment methods offered to customers and used with suppliers. Next, common challenges with the larger scope of payment services are identified and finally a conceptualisation of new business opportunities is discussed.

4.1 Overview of Cases

Five companies were interviewed over the course of a two-week period. These companies spanned the different SME subcategories, with staff numbers ranging from 7 Full-Time Equivalent (FTE) employees (Micro Business) to 51 FTE employees (Mid-Sized Business). More detail on the companies interviewed is available in Table 7 (over page).

The first company was a Health Non-Profit with 23 staff (Small Business), offering training and certifications to medical professionals in the UK National Health Service (NHS). The second company was a Publisher with 7 staff (Micro Business), publishing a magazine and selling advertising space in the magazine and on their website. The third company was a Data Cabling Installer with 15 staff (Small Business), providing installation of cabling for data and communication networks predominantly to NHS GP (General Practice) doctor surgeries. The fourth company was an Outsourced IT Support and Communications Provider with 51 staff (Mid-Sized Business), offering flat fee IT maintenance contracts for businesses, professional technical services and telecommunication network and data services. The fifth company was an accountancy firm with three offices, and 14 staff (Small Business), offering business accounting, bookkeeping and professional accounting advice.

During the interviews (interview questions and topics are listed in Appendix 1), each company was asked about two distinct areas of their business related to payments – how they invoiced their customers and the payment methods they accepted (aka Accounts Receivable); and how they were invoiced from their suppliers and what payment methods were offered (aka Accounts Payable). All the companies interviewed had a majority of businesses (B2B) as their customers (or solely had businesses as customers), while two (Cases 1 and 2) also had individuals (B2C) as customers – although those individuals only minorly contributed to their revenue. For the purpose of this study, we will primarily consider the B2B side of their business as their customers were overwhelmingly companies.
## Table 8: Overview of Case Companies and Interviews

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Industry and Job Role of Interviewee</th>
<th># Staff</th>
<th>SME Size</th>
<th>Customers</th>
<th>Payment Methods Offered</th>
<th>Biggest Challenges</th>
<th># Invoices Sent (to Customers)</th>
<th># Invoices Received (from Suppliers)</th>
<th>Invoicing style</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Industry: Health Non-Profit. Role: Director of Operations</td>
<td>23 staff</td>
<td>Small</td>
<td>98% of revenue from Companies, 2% from Individuals</td>
<td>98% Training: Credit Transfers, 2% Membership: Direct Debit (GoCardless), Credit Card</td>
<td>Suppliers dictating 90-day payment terms (instead of paying within 30 days)</td>
<td>B2B: 800/month, B2C: 200/year (&lt;20 month)</td>
<td>50-100/month</td>
<td>Training: Pay-on-Invoice, Membership: Subscription/Pull (in advance)</td>
</tr>
<tr>
<td>2</td>
<td>Industry: Magazine Publisher Role: Non-executive Co-Owner</td>
<td>7 staff</td>
<td>Micro</td>
<td>70% of revenue from Companies, 30% from Individuals</td>
<td>70% Advertisers: Credit Transfers, Payment Card, 30% Subscribers: Direct Debit (Outsourced), Credit Card</td>
<td>Cashflow stress. Late payers 45-60 days (instead of paying within 30 days). Keeping Subscribers subscribed (on recurring payments)</td>
<td>B2B: 35/month, B2C (Outsourced): 2500 subscribers on mix of either quarterly or half-yearly direct debit, or annual credit card</td>
<td>10-15/month</td>
<td>Advertising: Pay-on-Invoice, Subscribers: Subscription/Pull (in advance)</td>
</tr>
<tr>
<td>3</td>
<td>Industry: Data Cabling Installer Role: Managing Director/Owner</td>
<td>15 staff</td>
<td>Small</td>
<td>100% companies</td>
<td>Credit Transfers</td>
<td>Restrictions with NHS’ PO Process and uncertain labour estimates (quoting estimates and having PO raised for exact amount). Administrative tasks to track running balance of actual labour +/- against POs/invoices</td>
<td>B2B: 20/month, B2C: &lt;Unknown&gt;</td>
<td>20-30/month</td>
<td>Pay-on-Invoice</td>
</tr>
<tr>
<td>4</td>
<td>Industry: IT Support and Communication Provider Role: Finance Director</td>
<td>51 staff</td>
<td>Medium-Sized</td>
<td>100% companies</td>
<td>80% Direct Debit (GoCardless and Cashbacs), 20% Credit Transfer/ Payment Card/ Cheque</td>
<td>Administrative tasks to prepare for Communications invoicing cycle (rating calls) takes 3 full days a month</td>
<td>B2B: 800/month</td>
<td>250-300/month</td>
<td>Subscription (in arrears)</td>
</tr>
<tr>
<td>5</td>
<td>Industry: Accountant Role: Managing Director/Owner</td>
<td>14 staff</td>
<td>Small</td>
<td>Approx. 70-80% of revenue from Companies, 20-30% from Individuals</td>
<td>Credit Transfer, Payment Card, Direct Debit, Cheque, Cash</td>
<td>Collections. Has % of Annual Revenue outstanding, 1 staff member almost full time doing collections</td>
<td>B2B: 150/month</td>
<td>&lt;Unknown&gt;</td>
<td>Pay-on-Invoice, Subscription/Pull (in arrears)</td>
</tr>
</tbody>
</table>
4.2 Payment Methods offered to customers

All companies offered their customers a variety of payment methods, including a choice of predominantly Credit Transfer, Direct Debit or Credit Cards. Some companies mentioned they would accept cheques or cash. All companies offered payment terms for their invoices, with invoices generally due 30 days after issue – although these terms were not always met (this topic will be discussed in further detail later). There were several recurring themes with how companies chose certain payment methods, and what type of customer or work they were used for. First of all, there was a common theme that one-off transactional work was seldom expected to be paid up front or automatically – this type of work was usually paid manually by Credit Transfer. For companies that did recurring work and had an ongoing relationship with their customers, Direct Debits was a more common option, with Credit Transfer and Payment Cards also offered. Another theme that arose was that additional payment methods were offered to reduce friction or ‘payment excuses’ – as one interviewee (Case 5) put it, “You can pay me by BACS; but if you can’t log in to your internet banking, I’ll take credit card; but if you’ve lost your card, you can write me a cheque; and if you’ve forgotten your cheque book, don’t worry, I’ll take cash.”

Two companies (Cases 1 and 3) worked predominantly with the UK National Health Service (NHS), and were at the mercy of the NHS’ administrative and payment processing procedures and lead times. Despite invoices being issued with 14- or 30-day terms, the various NHS entities were more likely to pay after 60 to 90 days, and payment would only be made by BACS Credit Transfer. Despite the extended payment terms, the NHS was fairly consistent at paying within that extended time frame (i.e. they demanded longer terms, but then paid within those terms). As undesirable as extended payments terms are to a company, it appeared that this was a better state of affairs than what some of the other companies faced: for some companies, many customers were both paying later than the stated payment terms as well as being uncommunicative or inconsistent with their payments. A large amount of staff time was spent chasing up late payers: for one company (Case 2) it was one person for half a day to a day a week, for another (Case 5) it was almost a full-time job for one person. As Case 5 said, “There is a culture of paying late in this country.”

While companies wanted to be paid on time, and wanted faster, more reliable payments and cashflow, none of them had adopted a pre-pay or no-credit-terms approach – only one company (Case 4) was close to that model, with upwards of 80% of their customers on Direct Debit. Two of the companies with individuals as customers (Cases 1 and 2) offered those customers a choice of Direct Debit or recurring Payment Card transactions.

Additionally, it appeared that none of the companies used a price-driven approach with regards to late-payment fees or early payment discounts. Some companies (Case 1, 2, 4, 5) were willing to accept payment methods with higher costs such as Payment Cards (and therefore were implicitly accepting a discount once transaction costs were deducted).

Overall, the payment methods offered to customers were fairly standard across the companies, with all companies accepting Credit Transfers as their predominant payment method, and most offering other methods to reduce frictions for customers and to encourage
payment. Where possible, companies tried to implement automated payments (i.e. Direct Debit), but not all customers were willing to pay by that method (most notably the NHS).

It can therefore be seen that the payment methods themselves were not of particular concern to the companies interviewed, nor was the cost of the payment method. Rather, getting paid – and preferably getting paid on time – in whatever manner was of primary importance, and unfortunately this was not an element within the company’s direct control.

4.3 Payment Methods used with suppliers

Each organisation worked with a reasonably small shortlist of suppliers in comparison to the number of customers they had (each company had a ratio of approximately one supplier per three customers). These suppliers offered a range of payment methods, but generally preferred credit transfers and payment cards.

Most companies interviewed mentioned that they had two main categories of suppliers. The majority of a company’s suppliers sent invoices and offered credit terms, and allowed invoices to be paid by any of their available methods. A small number of their suppliers however (generally those offering subscriptions, recurring services, Software as a Service, or those suppliers based overseas) did not offer trade credit or payment terms, and only offered in-advance payment methods such as payment card or direct debit. Despite these suppliers effectively dictating the payment method and timing, none of the companies interviewed had any problems with that approach or with paying for these services up front. When asked, the companies interviewed all said that this pre-pay approach did not prejudice them against a supplier, and didn’t prompt them to consider other suppliers based on payment method. The companies interviewed said that when selecting a new supplier, the payment methods available had negligible impact on their selection decision, and that rather it was more reputation or recommendation focused, or based on the product offerings or the range of products. This confirms previous research that the selection of supplier is more relationship-focused, or based on the availability or exclusivity of offerings by the supplier (Grönroos, 1994; Boeck, Bendavid and Lefebvre, 2009).

Most of the companies interviewed touched on the issue of speed of their own payment of supplier invoices, and particularly with regards to paying within the due dates. The predominant attitude (Cases 1, 3, 4, 5) was that supplier invoices should be paid as quickly as possible, as “our reputation is important” (Case 1) and “the relationship [with our suppliers] is important” (Case 5). All were aware of cashflow pressures, and that paying suppliers late was an option – but as Case 4 said, “It’s not a game I like to play, as I don’t like it done to me”. This isn’t always possible however (Case 2), but the minimum goal was to “meet the payment terms most of the time”. It was particularly important to pay regular suppliers quickly (Cases 3, 4) – whether to keep the relationship healthy, or to stay within established credit limits.

The issue of timing and control over outgoing payments was also discussed, and the consensus was that while it was acceptable that some payments were automatically pulled on a date determined by the supplier, it was ideal to have final oversight over other payments to be able to manage cashflow. As Case 4 said, “if we can have them so they’re under our control to pay, then if we do have credit issues [...] you do have a bit more flexibility to say
okay, well maybe this month I might lean on some of the favours I've built up over the last few years and pay somebody slightly late. I don't like to do it, but the option is there.”

There was an interesting element of “Do as I say, not as I do” with some of the companies regarding attitudes towards payments. For most companies (Cases 1, 2, 3, 5), their invoices to customers were not being paid within their offered terms, and getting paid was a priority. Where possible these companies spoke about trying to speed up their incoming payments and increase the certainty of getting paid, and where possible setting up the ability to take the payment when it fell due (such as via direct debit). On the flip side, some companies (Cases 2, 4, 5) spoke about the importance of having control of initiation of payments to their own suppliers and being able to control the timing of payments to allow them to manage cash flow. So, for some companies, the ideal case would be where all customer invoices were automatically paid by direct debit on the due date, and all supplier invoices were paid manually when desired – and possibly after the due date if circumstances required it.

4.4 Biggest company challenges regarding payments

While designing this study and formulating the research question, I had expected to find that there were unmet needs or challenges faced by companies around the payment methods they had available. Throughout the interviews however, I found that the actual payment methods did not rank highly in terms of the biggest challenges each company faced with regards to invoicing and paying suppliers. In fact, there were very few challenges experienced around the payment methods themselves - payments are not that hard if the sender wants to make the payment. Numerous other challenges did arise, however, as we see in Table 9:

<table>
<thead>
<tr>
<th>Table 9: Challenges Identified with Payment Processes in SME B2B companies</th>
</tr>
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<tbody>
<tr>
<td>C1. Not being paid within invoice credit terms (Cases 1, 2, 3, 5)</td>
</tr>
<tr>
<td>C2. Large customers dictating extended credit terms (Cases 1, 3)</td>
</tr>
<tr>
<td>C3. Customer delays with approving invoices and/or matching to Purchase Orders (Cases 1, 3)</td>
</tr>
<tr>
<td>C4. Reconciling and identifying payments (Cases 1, 5)</td>
</tr>
<tr>
<td>C5. Administrative tasks related to preparing and sending invoices (Cases 3, 4)</td>
</tr>
<tr>
<td>C6. Staff effort required to chase customers for payment (Cases 1, 2, 3, 5)</td>
</tr>
<tr>
<td>C7. Maintaining a good relationship with customers while chasing them for payment so they will return for further work (Cases 2, 3, 5)</td>
</tr>
<tr>
<td>C8. Keeping customers on or migrating to a recurring subscription basis (Cases 2, 4)</td>
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</table>

While these challenges are interrelated, we can begin to look at them separately. As was seen in the previous sections, the largest challenge faced was around cashflow – particularly being paid on time (C1), and especially by large customers such as the NHS (C2). Prior research on late payments between businesses found that late payments of debts was often associated with a power imbalance between the parties, and larger companies were more likely culprits (Pike and Cheng, 2001; Paul and Boden, 2011). As Howorth and Wilson (1998, p. 308) put it, one view is “that late payment arises from customers who are dominant in relation to their
suppliers exercising market power and obtaining a cheap form of finance, the latter being powerless to impose sanctions.” Other research ties late-payment to the “ethical culture” of a company (Salamon and Mesko, 2016; Salamon, Milfeler and Belak, 2017), but that doesn’t appear to be evident in these cases.

The next two challenges (C3 and C4) both relate to matching up information about pre-authorisations for payments (i.e. Purchase Orders) with Requests for Payment (i.e. Invoices), and then matching these to the actual Payment made once it is received. All of the items and values on the purchase orders and invoices need to be entered into various business systems (such as accounting packages), and this requires many manual steps for both parties – and if the details do not match what was expected, delays occur.

Preparing and sending invoice was the next challenge identified (C5), and this challenge is particularly found in those companies billing for variable labour or professional services (Case 3 and Case 4), and for those companies billing for many discrete items each month (such as Case 4 who bills many different internet and telephony services each month with differing items and costs like telephone usage charges). Invoicing for professional services requires recording of time spent on a job, approval and signoff of the job and time spent, determining the charge rate, and adding these items to an invoice. For Case 3, this issue was complicated as while they worked on a professional services basis (time and materials billing), their primary customer (NHS) sent purchase orders in advance for their work – but the purchase orders were raised based on an estimate of the work to be completed. This, coupled with the NHS requiring Invoices to match the corresponding Purchase Orders, meant that there are a lot of internal administrative tasks to reconcile what was quoted and approved on a PO versus what work was actually completed.

Almost all case companies (Case 1, 2, 3 & 5) experienced a challenge with chasing customers for payment (C6), and as we saw that some companies spent a sizable fraction of time on this. It appeared that late paying customers fell into one of two groups – reliable but slow customers (the payment would be made with relatively few quibbles, but the process was slow), and unreliable or erratic customers (there may be minimal communication, last-minute concerns raised with invoices, unpredictable payment timing, slow payment methods used etc). These reliable but slow customers were often also dictating extended credit terms (Challenge 2), but payments would be made eventually. The second group is where most of the time chasing customers was spent. It is interesting to note that the one company who did not experience the issue (Case 4) was the largest company interviewed, and who potentially had better processes and more formalisation around credit management. They had chosen direct debits to automate and simplify the payment process, but this approach may only have been possible because of the nature of their customers and their ongoing relationship (ongoing monthly support contracts paid in advance, and if a payment was not made it is very easy to put the customer on credit hold and not deliver the service).

There is a challenge experienced with maintaining good relationships with customers who are in arrears with their payments (C7). This issue is particularly evident when a company has a reasonably small number of customers who have intermittent purchases, and who usually return for further work. In this situation, there is a power imbalance between the company
who has done one tranche of work and is waiting to be paid, and the customer who can use
the promise of future work as leverage against paying the outstanding amount in a timely
fashion. This situation can be exacerbated in the absence of standard procedures around
credit management, and around offering and enforcing credit limits.

The final challenge identified related to keeping or migrating customers to a recurring
subscription basis (C8). Where possible, companies wanted to reduce the friction for their
regular customers related to managing ‘lumpy’ bills and to smooth out costs (and
subsequently cashflow for the company), to reduce the overhead of managing the entering,
approval and paying of invoices and ultimately to keep transactions out of mind so the
customer continues with the service.

As can been seen from these findings, there are a number of challenges that B2B SMEs face
in the area of payments - however, the actual payment itself does not appear to be the
problematic area.

From my research, the biggest of these challenges was with getting paid on time, and with
getting administrative tasks completed to get invoices out correctly and quickly. The reasons
why invoices are not paid on time is because of delays caused by the processing and approving
of invoices in the supplier’s organisation (this was particularly obvious when the supplier is a
government organisation such as the NHS) or because the supplier chooses to pay late to
improve their own cashflow.

4.5 Conceptualisation of New Business Opportunities

As we saw in Section 2.8, more than 70% of important innovations in a variety of fields were
in response to market needs or demands (Utterback, 1974). And according to Bartels and
Reinders, “the failure of innovations is most often due to a firm’s lack of understanding of
consumer needs” (Bartels and Reinders, 2011, p. 601).

Returning to our original research question (Are there any areas for innovation in the realm
of B2B Payments?) we saw in Section 4.4 that SME B2B firms faced some key challenges, and
obtained insight into some of those unmet needs. Having gained an understanding of these
challenges, we can now look at how those might be addressed, and at potential new business
opportunities in addressing them. Looking at the Technology-Push, Needs-Pull model, all of
these challenges can be categorised as Needs-Pull – but as discussed earlier, the more
successful innovations are those that can couple a market opportunity with a technical
opportunity (Nemet, 2009), or by double-linking the Technology Source, Market Demand and
a Relevant Problem (Burgelman and Sayles, 1986). It is beyond the scope of this paper to
identify suitable technical opportunities or relevant problems and their potential linkages, so
this shall be left as an exercise for the reader.

We can see that the above eight challenges identified can be grouped into four main
categories: challenges causing pressure to business cashflow (challenges C1, C2); challenges
causing administrative overhead for both parties (challenges C3, C4); challenges requiring
labour-intensive internal tasks (challenges C5, C6), and challenges with maintaining customer
satisfaction and customer retention (challenges C7, C8). These challenges and the grouping is
collated in Table 10.
### Table 10: Grouping of challenges identified from SME B2Bs

<p>| | | | |</p>
<table>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Not being paid within invoice credit terms (Cases 1, 2, 3, 5)</td>
<td>Challenges causing pressure to Business Cashflow</td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td>Large customers dictating extended credit terms (Cases 1, 3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>Customer delays with approving invoices and/or matching to POs (Cases 1, 3)</td>
<td>Challenges causing Administrative Overhead for both parties</td>
<td></td>
</tr>
<tr>
<td>C4</td>
<td>Reconciling and identifying payments (Cases 1, 5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C5</td>
<td>Administrative tasks related to preparing and sending invoices (Cases 3, 4)</td>
<td>Challenges requiring Labour-Intensive internal tasks</td>
<td></td>
</tr>
<tr>
<td>C6</td>
<td>Staff effort required to chase customers for payment (Cases 1, 2, 3, 5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C7</td>
<td>Maintaining a good relationship with customers while chasing them for payment so they will return for further work (Cases 2, 3, 5)</td>
<td>Challenges with maintaining Customer Satisfaction and Customer Retention</td>
<td></td>
</tr>
<tr>
<td>C8</td>
<td>Keeping customers on or migrating to a recurring subscription basis (Cases 2, 4)</td>
<td></td>
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</tbody>
</table>

Looking at the first category of challenges causing cashflow pressure (challenges dealing with late payments and getting paid on time) we can see that the underlying need is to improve cashflow of the business. This can be addressed in many ways, including:

- identifying methods to get paid faster by customers
- introduction of pull-payment methods (such as direct debit)
- considering dynamic pricing methods (such as early-payment discounts or late fees)
- making the following up of late payments easier
- providing easier access for SMEs to financing (or making access to data easier to help with assessment of credit worthiness).

With the second category of challenges causing administrative overhead for both parties (challenges identifying and matching transactions and payments), the underlying need is to reduce the steps and time taken for customers to process and approve invoices, and to match purchase orders to invoices, and invoices to payments. This could be addressed through:

- electronic invoicing or ‘e-invoicing’ (Caluwaerts, 2010; Salmony and Harald, 2010)
- creating and linking better metadata around purchase orders, invoices and payments
- a Request for Payment solution (such as suggested by Ledford and Thomas, 2016)
- integration with financing or factoring offerings.
For the third category of challenges requiring labour-intensive internal tasks (challenges with chasing customers for payments or preparing invoices), the underlying need is twofold. The first underlying need (related to challenge C5 regarding preparing invoices) is to improve the speed and accuracy of billing customers. This could be addressed through:

- automation of invoicing or billing processes through purchase order approval solutions
- automation of invoicing or billing processes through solutions like Professional Service Automation (PSA) tools.

The second underlying need in this category (related to challenge C6 regarding staff effort to chase customers for payment) is similar to the earlier need to improve cashflow, but is slightly different. This need is to reduce the risk of late paying customers, and to improve credit management capabilities on the front-end. This could be addressed through:

- performing customer risk assessment up front
- data-based review of customer credit worthiness
- automation of early-intervention actions (like invoice reminders and issuing of statements)
- credit insurance or factoring solutions
- outsourcing of credit-manager role, processes and enforcement
- automation around adding late fees.

Finally, with the category of challenges with maintaining customer satisfaction (challenges keeping customer satisfaction high while chasing them for payment, and challenges with customer retention), the underlying need is to keep customers buying from the company with limited friction. This can be addressed through:

- looking at early-payment discounts rather than late-payment fees
- moving to recurring billing model (smaller consistent recurring payments, rather than ‘lumpy’ inconsistent billing)
- implementing pull-payments (such as direct debit)
- adopting a prepayment model
- diversifying client base
- implementing better credit control processes, and enforce credit limits.

While there are no easy answers here, implementation of some of these proactive front-end policies like credit limits and policies can help to prevent rather than cure the problem of late payments (Peel and Wilson, 1996).
5 Conclusion

In this section we will draw together conclusions from our research and findings, and answers to the research questions will be provided. Finally, limitations of the research will be discussed along with opportunities for future research.

5.1 Conclusions

As has been demonstrated, many of the current innovative offerings in the payments services arena are clustered in the Business-to-Consumer market, and there have been limited innovation in the Business-to-Business market – notwithstanding the fact that the total size of the possible B2B ecommerce market is at least twice as large as the B2C market. The needs of B2B and B2C customers have been shown to be vastly different from each other, with a higher level of complexity in B2B business and payment needs compared to B2C. Therefore, the problems to be solved for each segment and the solutions or potential innovations needed are correspondingly different. This also means that while an innovation may be successful in the B2C market, it’s unlikely that this will be able to be copied wholesale into the B2B market. This paper has focussed on Small to Medium-sized B2B companies in the United Kingdom, and set out to discover their current practices with regards to using various payment services, and to discover if there was any scope for innovation in the payment services they use – and if so, in what areas that innovation may take place.

This research began with a review of literature of B2B and B2C commerce and e-commerce, research on payment services, and an analysis of existing solutions in the marketplace for B2B and B2C. Interviews were sought with eight small B2B companies in the UK who worked in a range of service-based industries, and semi-structured interviews were conducted with owners or directors of five firms by telephone. Based on these interviews, shared themes were recognised, and common challenges were identified.

Analysing these case companies revealed that while each company faced a number of challenges related to their payments processes, none of the companies experienced issues with the actual sending or receiving of money – the payment methods available to the businesses were sufficient for their needs. While all companies experienced some challenges surrounding the payment process (discussed next), it can be concluded that in the absence of any issues with the existing payment methods, there is no need to adopt or search for any new innovations in payment methods. We can therefore answer Research Question 1 (Why are there limited successful innovations in B2B Payment Services?): Without payments being a ‘pain-point’ there is no driving force for these companies to seek new solutions, and therefore limited scope for new innovations to be successful – or to put it another way, there is limited scope for Technology-Push led innovation.

The challenges that were identified in the case companies were related to the larger processes surrounding paying and getting paid, and in the steps in the business purchasing flow surrounding the payments. The research also highlighted other challenges such as the difficulty for SMEs to be paid on time. We saw that some of the challenges occurred earlier than the invoicing stage, including issues preparing and sending invoices; and others occurred after the invoicing stage, including chasing customers for payment, and reconciling and
identifying payments made. We can therefore answer Research Question 2 (*Are there any areas for innovation in the realm of B2B Payments?*): The ‘pain-points’ for these SMEs was in the larger scope surrounding payments, so any search for innovation needs to take a bigger-picture view and look at the end-to-end processes – and not just look solely at payments. Once the perspective for identifying innovative solutions is shifted to include the whole payment cycle and business purchasing flow, we can see a lot of scope for Needs-Pull led innovation within SMEs and B2Bs.

5.2 Limitations

There were a number of limitations to this research that should be noted. First and foremost, the short timeframe of the research limited the number of interviews that were able to be conducted, and the constrained amount of time with each interviewee limited the amount of detail that could be gleaned from each company. While five interviews do allow for some useful qualitative data to be collected, it is still a rather limited sample size that could be expanded upon with more time, or expanded with additional perspectives from other people within the company.

In relation to the interviews themselves, a few limitations should be noted. Firstly, only one person was spoken to at each company. Every effort was made to ensure that the person had the knowledge to answer all the questions asked, however it’s possible that interviewees may have lacked a full understanding about the topics (Kruger and Dunning, 2009). There was also a risk of framing or social pressure from the interviewer, or that the interviewee was subject to ‘social desirability bias’, where they felt compelled to give a correct or socially-acceptable answer to questions. This was potentially the case with questions about whether an interviewee paid their suppliers late or on-time, but this topic was addressed sensitively and was approached from several directions to attempt to validate and corroborate answers given.

Some interviewees had limited time available, and fit the interview in while travelling to customer sites or between meetings – leading to strict time constraints and unavailability of access to specific detailed data. The interviews themselves were quite detailed, but limited also by the amount of time able to be spent with each subject – I expected that 30 minutes would be sufficient to cover all the topics, but this was an underestimate. Where time allowed, interviews ran longer and covered more ground. The use of telephone for the interviews (compared with in-person or video) was also a limitation, as there was no ability to observe body language or facial expressions of the interviewee.

There is potential for this research to be influenced by bias as there is only one researcher and their background and experience is in IT and business processes. Therefore, it is possible that bias and experience in certain areas of the industry influenced the outcome of this research, or lead to confirmation bias on the behalf of the researcher. However, every effort was made to remain objective throughout the research process and to be open and curious to what came out of the research rather than try and pre-empt or influence it.
5.3 Future research

While limited in scope, this research has uncovered some interesting results that would be worth investigating further. Any future research could start by continuing the work started here but on a larger scale, with broader and more in-depth interviews to highlight any other B2B payment ‘pain points’ that may have been missed due to the small sample size. Further research could also look at different geographies, or specific industry verticals.

Continuing on from there, it would be interesting to launch further research from the premise concluded in this thesis – that one of the main reasons there is limited innovation in payments in B2Bs is that the innovations need to encompass the whole business cycle, and not just the point at which the money is actually transferred.

This thesis has hypothesised some possible areas of innovation and new business opportunities, however further research could dig into each of the described areas of the business cycle. As mentioned in Section 4.5, there is potential here for research to identify suitable technical opportunities and potential linkages. Further to this, the development of more targeted innovations and suggestions of directions for viable innovations for the complex B2B payment cycle may be possible.

One particular theme that arose during this research was that B2Bs more often than not, struggled to receive payment on time. Further investigation of this area would be useful - in particular, an examination of whether dynamic pricing and explicit discounts for prompt payment through a low-cost method (i.e., Credit Transfer instead of credit card) had any impact on payment speed, or on shifting of payment volumes between payment modalities.

Finally, Christensen’s “Jobs to be Done” model (Christensen et al., 2007) could be a helpful model when researching these new innovations in B2B payments. Very briefly, this model assesses a given product or service and analyses the ‘job’ it has been hired to do for a given customer group (Christensen et al., 2007). This model could help to assess possible innovative solutions from a different angle previously unexplored.
6 References


Appendix 1: Interview topics and questions

GENERAL
Can you give an overview of your company? What industry are you in?
How many staff do you have?
What sort of customers do you work with?
What sort/categories of work do you do
How do you charge? (up front, in arrears, monthly, projects, etc)
How many customers do you work with (avg/monthly)
Are they repeat/recurring customers or new?

RECEIVABLES SIDE
What accounting package do you use?
Do you receive/manage incoming POs?
Roughly how long does it take to process an order/PO?
How do you prepare and send invoices? (email/post/e-invoice)
How many invoices a month (by category if needed)?
Roughly how long does it take to create and send an invoice? (or how long to send all the invoices for the month)
What payment types do you accept?
Is the Cost per transaction important? / speed? / control? / repeating nature?
Do you offer credit terms?
How many days of credit do you normally offer?
What are your biggest issues with invoicing and Collections?
Do you have issues with customers not paying or paying late?
What are your biggest issues with the types of payments you accept?
Why do you use the payment methods you’re using?
Have you considered any others? What would make you adopt other methods?

PAYABLES SIDE
How many suppliers do you deal with on a regular basis?
How many orders and invoices a month?
How CAN you pay these invoices?
How DO you choose to pay? And why?
Is the Cost per transaction important?
Is the speed of the transaction important?
Do they offer terms? Do you pay within terms?
Roughly how long does it take to process and record an invoice from a supplier?
Do you have (multi-person) approval processes for supplier invoices?
Roughly how long does it take to process and send a payment to a supplier?
What are your biggest issues with processing invoicing and paying suppliers?

How do you select a supplier?
Does payment method or credit terms affect selection of a new suppliers?
How do you assess the effectiveness and processes of your Accounts function?