Supply Chain Finance Adoption: Three is a Crowd in Entangled Relationships

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Declaration

This thesis is my own work and it has not been submitted in support of an application for another higher degree or qualification elsewhere.

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Abstract

Supply Chain Finance (SCF) has gained increasing attention in recent years – for both favourable reasons, e.g. the critical need for working capital during economic recovery, and adverse reasons, e.g. high-profile scandals and abuses of SCF reported in the media such as Greensill and Carillion. The SCF literature has primarily focused on the economic advantages of SCF, and a so-called win-win-win approach claiming that all the parties involved , e.g. the bank, buyer, and supplier, would all benefit from SCF arrangements. Even though previous research on the adoption of SCF has pointed to the reluctance of firms, especially suppliers, to adopt SCF, the literature has given most attention to large focal firms, placing less emphasis on their supply chain partners. Yet supplier reluctance is also important to these focal firms as the successful implementation of SCF is determined by the degree of participation and frequency of transactions with suppliers. This has produced a need to systemically understand how small, less powerful non-focal firms construct their understandings of SCF and make decisions about SCF participation.

This thesis investigates the understandings of, and the decision to adopt, SCF primarily in SMEs, both upstream as suppliers and downstream as distributors, in two different settings ─ the UK, where SCF is relatively well developed, and Thailand where SCF recently started in 2016. Given the dissensus in the literature regarding the appropriate theoretical underpinnings, this study employs a grounded theory-based methodology in which no theory was committed to before data collection and analysis, allowing for a substantive theory of SCF relationships to emerge from the collected data. This involved 56 interviews with SMEs, banks and subject experts as well as analysis of supporting documents. Consistent with grounded theory, the study

sought to identify the main concern of the research participants and the way in which they dealt with this identified main concern. Through a constant comparative analysis of interview data, supporting documents, and relevant literature, the emergent main concern or core category was identified as the 'Dyadic - Triadic distinction'. This distinction was between dyadic forms of SCF, in which informants had relatively independent relationships in their physical and financial supply chains, and triadic forms, in which relationships were entangled in some way. Triadic forms appeared to be inherently problematic, leading to the thesis that 'Three is a Crowd'. Participants dealt with this main concern through five interrelated categories of concern ─ Risk, Relationship, Awareness, Control, and Context.

Following the emergence of the main concern or core category and the five interrelated categories, a systematic analysis was undertaken of how transaction cost economics (TCE), which was identified as the most appropriate formal theory, could and could not account for the findings. For example, many of the findings could be interpreted in terms of opportunism and information impactedness, but there were concerns with relationships and control that could not be explained by TCE. From this analysis a qualitative model of how SMEs understood and made decisions to adopt SCF was proposed. In addition, a more detailed model was developed to show the significance of signalling concerns in the findings.

The main contribution of this thesis is to show how the firms often meant to be the primary beneficiaries of SCF – SMEs – are much less concerned with technical advantages (such as lower financing cost), and much more concerned with the relational consequences of participating in more complex triadic forms of SCF. The key practical implication that is drawn is that focal firms need to be aware, when offering triadic SCF to their smaller supply chain

partners, that these partners often have existing dyadic SCF relationships. Therefore, their decision to adopt an offered triadic SCF is not straightforward, but involves participating in a new relationship and at the same time having to maintain or reduce existing ones — often including both financing and supply chain relationships.

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> "One of the symptoms of an approaching nervous breakdown is the belief that one's work is terribly important"

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List of Abbreviations

DIO/DIH	Days Inventory Outstanding/ Days Inventory Held
DPO	Days Payable Outstanding
DSCF	Dyadic Supply Chain Finance
DSO	Days Sales Outstanding
RF	Reverse Factoring
SMEs	Small and Medium-sized Enterprises
SCF	Supply Chain Finance
TCE	Transaction Cost Economics
TSCF	Triadic Supply Chain Finance

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List of Publications

Parts of this thesis have been published in the following conference papers and doctoral seminar papers.

Conference Papers

Phraknoi, N., Stevenson, M. & Busby, J. (2021) *Understanding supply chain finance adoption from the participating firm perspective*. Unpublished paper presented at 28th International Annual EurOMA Conference. Online, July 5-7, 2021.

Phraknoi, N., Spring, M. & Xiao, L. (2019) *Why suppliers seem reluctant to adopt supply chain finance: insights from UK SMEs*. Unpublished paper presented at 26th International Annual EurOMA Conference. Helsinki, Finland, June 17-19, 2019.

Doctoral Seminar Papers

Phraknoi, N. (2020) *Becoming a third party: a grounded theory of supply chain finance*. Unpublished paper presented at 19th EurOMA Doctoral Seminar. Online, June 25 - 26, 2020.

Phraknoi, N. (2019) *Supply Chain Finance Adoption: SME Suppliers' Perspective*. Unpublished paper presented at 18th EurOMA Doctoral Seminar. Helsinki, Finland, June 15 - 16, 2019.

Chapter 1 Introduction

1.1 Research background and motivation

The collapses of Carillion in January 2018 and Greensill Capital in March 2021 have shone a spotlight on Supply Chain Finance (SCF), particularly because of their connections to the 2012 UK government SCF Scheme. The scheme ─ announced by the former Prime Minister David Cameron later employed by Greensill ─ aims to help SMEs (Small and Medium-sized Enterprises) gain access to lower cost financing and mitigate issues of late payment (GOV.UK, 2012).The collapses have attracted negative publicity, particularly Carillion's use of SCF to exploit its SME suppliers (Business Energy and Industrial Strategy and Work and Pensions Committees, 2018). The giant construction firm was among the first signatories to the government SCF scheme only to use it to force an extended payment term of 120 days on to many suppliers since 2013 (Carillion, 2014). By the time it went into compulsory liquidation, Carillion owed approximately £2 billion to its 30,000 suppliers (Business Energy and Industrial Strategy and Work and Pensions Committees, 2018). While the collapse of Greensill Capital may have nothing to do with exploitation of SMEs, this negative publicity may worsen the current limited participation of SMEs in SCF arrangements pointed out in previous studies (Wuttke et al., 2013a; Wuttke et al., 2019).

SCF is a relatively new area of supply chain management research concerning financing that is directly linked to the physical flow of supply chains. The supply chain management literature has focused primarily on physical and information flows but paid less attention to the financial flow (Blackman et al., 2013; Wuttke et al., 2013b; Silvestro and Lustrato, 2014). The financial flow ─ the movement of financial resources (e.g. finance, payments, interest, etc) between

supply chain members, both primary members (i.e. sellers and buyers) and supporting members (i.e. banks and logistics service providers) ─ has been largely taken for granted, particularly the use of SCF which concerns financing required to fill the working capital gap (i.e. the gap between paying suppliers and receiving customer payments) and to fund operations (Wuttke et al., 2013b; Silvestro and Lustrato, 2014). Only fairly recent research has started to investigate the financial flow generally as well as SCF specifically (Blackman et al., 2013; Wuttke et al., 2013b; Silvestro and Lustrato, 2014).

SCF is typically used by businesses to fill the gap between cash inflow received from delivery goods or services (i.e. revenues) and cash outflow mainly used to fund operations (i.e. expenditures) (Hofmann, 2005; Silvestro and Lustrato, 2014). This 'working capital gap' is incurred principally due to a timing problem in supply chains in which upstream firms have to pay for inputs and production before receiving the payment for their products or services from downstream firms. The timing of the payment is mainly determined by the payment term which is agreed upon by the supplier and the buyer under deferred payments or trade credit contracts (Gupta and Dutta, 2011). Suppliers of goods and services offer a typical payment term of 30 days in order to win business or increase sales (Fabbri and Klapper, 2016). Although trade credit contracts are common, the cost of finance to small firms to fund the working capital gap is much higher compared to large firms because of their typically higher credit risk. And in practice the timing of the payment may be longer than a typical 30-day term, especially when the buyer is a large corporate-sized firm and the supplier is an SME, due to the greater bargaining power of the former (Fabbri and Klapper, 2016; Cho et al., 2019). The timing of the payment may be stretched out even further by practices of late or extended payments by some

large buyers to hold onto cash longer, or improve their financial performance (Randall and Farris, 2009; Paul and Boden, 2011).

SCF encompasses several financing mechanisms both traditional, including factoring and inventory finance, and innovative, such as reverse factoring and distributor finance. Among several mechanisms, nonetheless, reverse factoring has gained the most attention from scholars due to the promise of considerable economic benefits, and the claim to help SME suppliers gain access to finance at lower interest rates based on the creditworthiness of their larger supply chain partners (Liebl et al., 2016; Kouvelis and Xu, 2021). The SCF literature has promoted reverse factoring as a win-win approach that can help large buying firms extend payment terms while offering small suppliers an option to receive an early payment with a discount (Hofmann and Zumsteg, 2015; Templar et al., 2016). Yet, although specific SCF mechanisms such as reverse factoring appear to be a good model, participation by suppliers has been very limited. Previous studies reveal the hesitation of suppliers to adopt SCF (Wuttke et al., 2013a; Wuttke et al., 2019). Since the successful implementation of SCF is determined by the degree of participation and frequency of transactions among suppliers (Dunn, 2011; Hofmann and Zumsteg, 2015), this reluctance has a general significance. Thus, it is important to understand the origins of this reluctance by examining how suppliers understand SCF arrangements and how they make decisions to adopt, or not adopt SCF.

Current empirical research in the SCF literature does focus on issues in relation to SCF adoption (Caniato et al., 2016; Martin and Hofmann, 2019; de Goeij et al., 2021). However, prior studies appear to overlook the possibilities that firms already have existing financing arrangements with their own banks. Participating in a new financing relationship means firms would have to

move or modify existing relationships with potentially significant consequences. In addition, the most recent literature on this problem has tended to focus on specific SCF mechanisms, especially reverse factoring (Wuttke et al., 2013a; Liebl et al., 2016; de Goeij et al., 2021), whereas the reality is that firms use them in combination, particularly pre- and post-shipment SCF mechanisms. For example, firms that need purchase order finance (i.e. pre-shipment SCF) to buy raw material for production typically use post-shipment SCF such as factoring or invoice discounting to payback inventory finance since the latter is costlier than the former (Tanrisever et al., 2017).

Moreover, most attention has been given to the main SCF actor ─ the larger, corporate firm that initiates SCF arrangements such as reverse factoring (Wuttke et al., 2013b; Caniato et al., 2016). Much less attention has been given to SMEs, who are often claimed to be the main beneficiaries of SCF arrangements. This is especially the case in times like the present, during economic recovery and the aftermath of the disruption caused by Covid-19 (Tang and Yang, 2020). SMEs are the supply chain members that suffer unequal power relationships which often lead to problems in relation to the timing of their payments, which include dictated longer payment terms, late payments, and unilaterally extended payment terms. Moreover, SMEs are the supply chain members that need access to inexpensive finance and would benefit most from SCF considering the interest rate difference between SMEs and the corporate buyers or suppliers (Lekkakos and Serrano, 2016; de Goeij et al., 2021). Furthermore, the emphasis on SMEs is imperative because previous studies include mostly suppliers, often the larger suppliers, that have accepted SCF (Wuttke et al., 2013a; Martin and Hofmann, 2019), so tells us little about the smaller suppliers that may not have been offered SCF, or those that have rejected SCF offers.

1.2 Research questions and context

This thesis examines the understandings of, and the decision to adopt, SCF in SMEs who are suppliers or distributors of a corporate focal firm. Given the dissensus in the literature regarding the appropriate theoretical underpinnings for supply chain finance generally, this study employs grounded theory methodology in which no theory was committed to before data collection and analysis. Following the observations made in the previous section about SMEs' reluctance to take up SCF in the form of reverse factoring particularly (since this is the most common and cited SCF mechanism), the study started with an initial research question:

What impedes the adoption of reverse factoring (RF) from the supplier's perspective?

Consistent with grounded theory, the participants' concerns were taken as the starting point of investigation, and it was therefore important to talk to research participants (SMEs and banks) in their own terms, which turned out to mean dealing with all forms of SCF they might be using or considering using. As will be discussed later, this meant the initial research question evolved during the fieldwork into an emergent research question:

How do SMEs and banks construct their understandings of, and make decisions about, the adoption of supply chain finance (SCF)?

The study was carried out in two countries, at different stages of SCF development, and different in terms of their general economic development. For example, the legal framework supporting SCF has been introduced only very recently in Thailand but has existed in the UK for decades. And the banking industry in Thailand consists of larger numbers of less powerful

banks, in comparison with the UK. Both aspects turned out to be important in the findings. The method, as detailed in the body of the thesis, involved interviewing SME owner-managers. In keeping with grounded theory, it became important then to include banks in the fieldwork as the SME participants stressed the importance of their banking relationships. Nonetheless, banks' interviews were aimed at gaining insights into their relationships with the SMEs and at clarification of different SCF relationships, so the focus remained on the SMEs' participation in SCF. Subject experts and supporting document analysis were used to clarify informants' meanings and fill out their explanations of particular mechanisms and practices.

The key contribution of this study is the finding that when actors deal with supply chain finance the main concern is with the entangling of the physical and financial supply chains. This has implications for relationships, control and signalling, and these influence the decisions to adopt or participate in specific forms of SCF, especially the more complex forms like reverse factoring.

1.3 Structure of the thesis

The remainder of this thesis consists of a further six chapters as outlined below:

Chapter 2 Background on the practice of SCF provides description and discussion on the practice of SCF. This is considered essential in explaining the variety of SCF mechanisms, and more importantly dealing with the confusion about terminology. The chapter also discusses the controversy about the recent Greensill scandal, as well as the abuse and misuse of SCF in several cases including Carillion. Chapter 2 is based mainly on the practitioner literature and news sources.

Chapter 3 Literature review presents a review of the SCF literature to date, including related concepts such as financial supply chains. Prior work is analysed in terms of its focus (e.g. mechanisms, actors, benefits, etc), methods and theories employed.

Chapter 4 Methodology discusses the research design including the justification of the grounded theory-based approach, and pragmatist orientation. It also deals with sampling, data collection and analysis.

Chapter 5 Findings presents what in grounded theory is termed the 'core category' — the 'Dyadic-Triadic distinction' — which is what emerges as the informants' main concern. The findings show that the triadic forms of SCF which entangle the physical and financial supply chains were problematic in the informants' views, leading to a thesis that 'Three is a Crowd'.

Chapter 6 Discussion begins with a discussion of the core category and its significance in relation to the literature. It then discusses the rationale for choosing transaction cost economics (TCE) as a theoretical lens to deal with the findings. The aim was to discuss the findings that the theory could and could not explain. It seemed important to explore in detail how far TCE could account for the way SCF is understood and decided upon by the participants. What it could not explain adequately turned out to be the importance of relationships, the concerns with signalling within those relationships, the need for control, and the embeddedness in contexts. The issue of relationships was not simply about maintaining relationships, but rather about balancing the complexity of relationships involved in moving from one SCF mechanism to another. Moreover, these relationships were not only supply chain relationships but also banking relationships.

Chapter 7 Conclusion summarises how the research questions were addressed. The chapter also discusses contributions to knowledge and practitioner implications. Perhaps the main contribution is to understand SCF through the views of the actors, showing that these views make a basic distinction between two forms of SCF – the dyadic and the triadic – and showing that the triadic is inherently problematic in certain ways. The final section describes limitations of the study including suggestions for future studies.

Chapter 2 Background on the practice of SCF

2.1 Introduction

This Chapter aims to provide background on the practice of supply chain finance (SCF) regarding definitions, terms, synonyms and basic mechanics of various SCF mechanisms. This chapter is based primarily on practitioner and associations' publications, reports in the public domain, news sources and webpages of relevant commentators while also using academic papers when necessary. A full literature review is given in Chapter 3. The intention of this chapter is to reduce confusion and establish a firm foundation for the study, since it is generally acknowledged that there is no consensus on the definition and scope of SCF, despite it having been discussed in the literature for decades (Nienhuis et al., 2013). The Global SCF Forum (2016), one of the key SCF associations, in their first edition of the 'Standard Definitions for Techniques of Supply Chain Finance' has recognised that:

> "The novelty of the subject matter of Supply Chain Finance led to the usage of a range of expressions, terms and terminology that were – and remain today – often inconsistent, opaque and even contradictory".

The remainder of this chapter consists of a further nine sections as outlined in Figure 2-1, starting with a brief explanation of the working capital gap and trade credit in relation to SCF. This is followed by an explanation of the practice of SCF, encompassing key SCF actors, basic mechanics of common SCF mechanisms, and key similarities as well as differences among mechanisms. The next three sections discuss late payment and the promotion of SCF, the abuse

and misuse of SCF, and connections between recent COVID-19 disruption and SCF. The last section summarises this chapter and provides an overview of the next chapter.

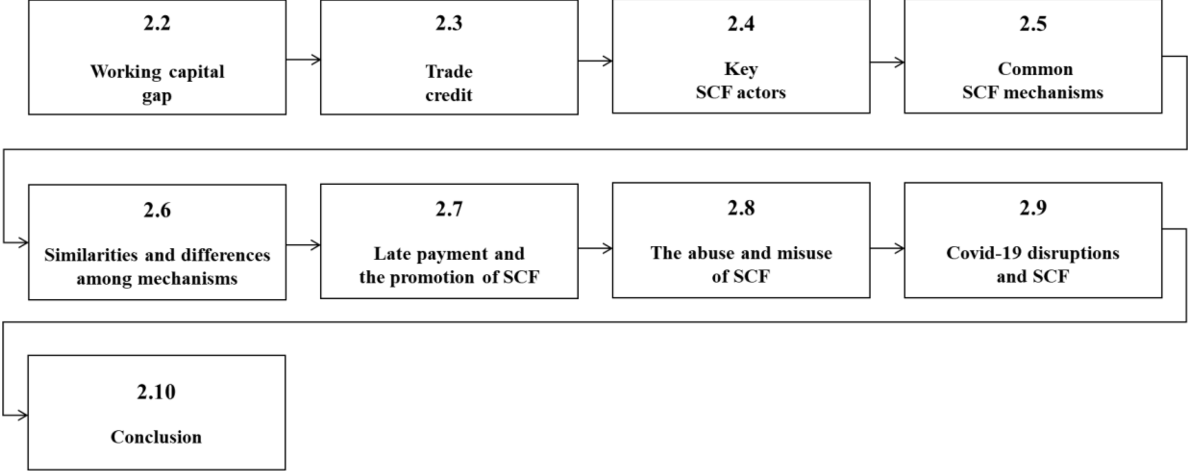

Figure 2-1 Flow of Chapter 2

2.2 Working capital gap

SCF concerns the financing required to fill the working capital gap and fund operations (Wuttke et al., 2013b; Silvestro and Lustrato, 2014). The working capital gap is the difference between the time when a firm pays their suppliers for raw materials and the time when the firm is paid by its customer (See Figure 2-2). This working capital gap, formally known as the Working Capital Cycle (WCC), Cash Conversion Cycle (CCC), or Cash-to-Cash Cycle (C2C), is one of the most significant supply chain key performance indicators (KPIs) (Lamoureux and Evans, 2011). According to Richards and Laughlin (1980) and Gentry (1990), Cash Conversion Cycle (CCC) or working capital gap is equal to:

Receivable Days (Days Sales Outstanding: DSO)	+	Inventory Days (Days Inventory Held: DIH)	-	Payable Days (Days Payables Outstanding: DPO)

It can be seen from the example in Figure 2-2 that the working capital gap = DSO (30 days) + DIH (45 days) – DPO (30 days). Thus, in the example, there is a 45-day gap in which the firm needs to fund its operations by either internal or external sources of finance. Formulae for calculating DSO, DIH, and DPO can be found in Appendix A.

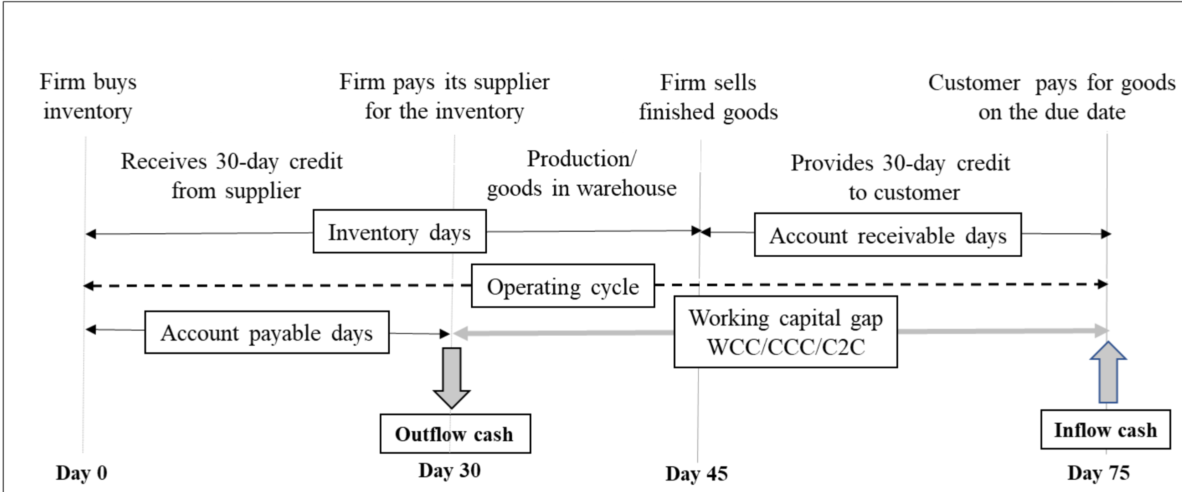

Figure 2-2 Working capital gap or Cash Conversion Cycle (CCC) (Adapted from Richards and Laughlin, 1980, p. 35)

The lower the Cash Conversion Cycle (CCC), the better, all other things being equal. A negative CCC is desirable, indicating the number of days the company is holding cash from a sale before paying its supplier (Randall and Farris, 2009), while a positive CCC denotes the number of days that cash is being tied up in supply chains and for which the company needs finance. The larger the cycle (a high positive figure), the more finance is needed (Lamoureux and Evans, 2011). Firms can reduce their working capital gap or CCC by 1) lowering inventories held; 2) reducing accounts receivable by requesting customers to pay early or shorten customer payment terms; and/or 3) increasing accounts payable by paying their suppliers late or extending supplier

payment terms (Randall and Farris, 2009). Among the three strategies, companies tend to increase accounts payable, especially large corporate firms with higher bargaining power (Paul and Boden, 2011; Fabbri and Klapper, 2016). After the 2008 financial crisis, it was evident that more and more large firms adopted the late or extended payment term strategy to improve their CCC (Paul and Boden, 2011). However, this optimisation strategy of large buying firms can lead to a sub-optimisation in their supply chain partners (Randall and Farris, 2009). This may eventually lead to supply chain instability due to bankruptcy of lower-tier suppliers (Raddatz, 2008; Lamoureux and Evans, 2011; Wuttke et al., 2013b).

Reverse factoring is currently the most popular and most cited SCF mechanism due to its potential to help reduce payment tensions between buyers and suppliers in managing cash flow and working capital (Randall and Farris, 2009). By having banks or other financial providers as an intermediary, this SCF practice allows buyers and suppliers to experience different payment terms: the large buyer can extend DPO (Days Payable Outstanding) while its SME suppliers shorten their DSO (Days Sales Outstanding) (Global SCF Forum, 2020). Nevertheless, reverse factoring may not be the right financing option for every business. This popular SCF practice is currently available to large corporate firms and their strategic suppliers, but there are several SCF mechanisms that can be used to finance working capital gaps. It is therefore important to understand the range of SCF mechanisms, their benefits, and risks to identify the appropriate practice according to the nature of a supply chain.

2.3 Trade credit

According to Gelsomino et al. (2016a), both trade credit and working capital management are closely linked to SCF. Providing trade credit adds to the working capital gap. The financial

flow of supply chains, specifically the payment for goods or services, often depends on the credit term agreed upon under trade credit contracts (Gupta and Dutta, 2011). Under such contracts, money is not immediately paid, and the deferral of payment provides an essential source of working capital to the buyer (Burkart and Ellingsen, 2004). However, this creates a timing problem and therefore a financing need for suppliers who have supplied goods but not received revenues. Suppliers use internal or external sources of money to fund the credit period provided to their buyers. The former is mainly from either the business itself (e.g. retained earnings) or from the owner, whereas the latter is primarily bank credit (e.g. short-term financing).

Trade credit is a form of short-term finance with no interest, extended by a supplier to its buyer primarily to win business or enhance sales (Fabbri and Klapper, 2016). It is an essential source of finance for firms, especially ones that have no or limited access to bank credit (Burkart and Ellingsen, 2004). Trade credit accounts for about 40 percent of the current liabilities of firms (Borde and McCarty, 1998). In the U.K. trade credit is extended in over 80 % of business-to-business transactions (Paul and Boden, 2011). Most supply chain members provide trade credit (as a supplier), while using trade credit (as a buyer) concurrently (Fabbri and Klapper, 2016). Under credit contracts, the provider of credit or the supplier becomes the lender or trade creditor while the customer becomes the borrower or trade debtor.

Trade credit would be a practical source of short-term finance for downstream supply chain members if the supplier were a large company that had cash reserves (i.e. internal source) or had relatively easy access to inexpensive bank credit (i.e. external source). However, many suppliers are SMEs (Small and Medium-sized Enterprises), but still have to provide trade credit

to large buying firms in order to win business, build relationships with buyers, or signal the quality of their goods and the strength of their financial status (Peel et al., 2000). Such providers, therefore, need finance (SCF) to fund the gap.

Credit terms or payments terms can vary widely among different industry sectors, generally ranging from 30 to 90 days. For this duration, the credit sales generate accounts receivable on the supplier side, and accounts payable on the buyer side (Giannetti et al., 2011). Accounts receivable and accounts payable are the two key components of working capital in which the former is an illiquid asset that can be sold or used as collateral for working capital finance (Euro Banking Association, 2014). The typical payment term is net 30 EOM (End of Month) where the customer needs to pay at the end of the month following the month of the invoice (see Table 2-1).

Table 2-1 Typical examples of payment terms (Adapted from My Credit Controllers, 2020)

Credit Terms	Description
Net 30	Payment of the net amount outstanding on the invoice is due thirty calendar days after the date of the invoice
Net 30 EOM	Payment is due at the end of the month following the month of the invoice
2/10 Net 30	Payment of the invoice is due within thirty calendar days, but payments within 10 days are eligible for a discount of 2%

Sometimes, a supplier may encourage its customers to pay more quickly by offering an ‘early payment discount’, one from of SCF practice. For example, ‘2/10 Net 30’ is the form of early payment discount offering a discount of 2% if the customer pays within 10 days. Otherwise, the customer can pay the face value of the invoice (without a discount) at the due date (30 days) (My Credit Controllers, 2020).

2.4 Key SCF actors

SCF arrangements typically involve either two or three main actors. The two main parties in SCF relationships are primary supply chain members: suppliers (sellers) and buyers. The third actor is an external funder, a bank or a non-bank financial institution such as the recently collapsed Greensill Capital (Ramnarayan, 2021). In recent years, another actor ─ a technology (platform) provider ─ has played an increasingly significant role in SCF arrangement. The main role of technology providers, generally known as FinTechs (financial technology firms), is to provide an online transaction platform (i.e. an SCF platform) to facilitate the exchange of information between buyers, suppliers and, external funders, especially in two SCF arrangements ─ reverse factoring and dynamic discounting, as displayed in Table 2-2 (Deutsche Bank, 2018). A fifth potential actor is a credit insurer who provides credit risk mitigation in some SCF arrangements such as distributor finance (Global Business Intelligence Corp, 2012).

Table 2-2 Platform providers (Adapted from Deutsche Bank, 2018, p. 23-24)

Platform provider (Fintech)	SCF mechanism		
	Reverse factoring	Dynamic discounting	Distributor finance
TradeIX			√
Kyriba	√	√	
Demica	√		
Taulia	√	√	
Orbian	√		
PrimeRevenue	√		

Banks may own the platform or utilise a third-party platform provider. For example, Barclays and PrimeRevenue are partnering to offer reverse factoring to Barclays' customers such as the Co-op food company (PrimeRevenue, 2020). The potential benefit of using a third-party platform provider is that corporate customers can choose between using their own funds, or

single or multiple external funders. Alternatively, some firms may develop their own platforms (PrimeRevenue, 2014). Table 2-3 shows the three types of platform used to facilitate SCF transactions together with the involved SCF actors. The table comes from the cited source, and it is not completely clear what the relationships is between the corporate firm and platform provider in the case of 'in-house development platforms'.

Table 2-3 Types of platforms with examples of SCF actors (Adapted from PwC, 2018, p.3)

Type of platform	Firm	Platform provider	Funder
Bank proprietary platforms	Nestle	-	Citi
	Unilever	-	Santander
Third-party platform	Sainsbury's	PrimeRevenue	RBS
	Co-op	Demica Citadel	Multiple
In-house developed platform	Carrefour	-	Santander, BNP Paribas, Unibanco
	Metro Group	-	Deutsche Bank

The basic mechanics of the common SCF mechanisms, as explained later in Section 2.5, are based on a simplified model of a single bank providing funding. In practice, there are several funding models available through a combination of funders (banks or non-banks) and platform providers (in-house or outsourced). These funding models are outlined in Table 2-4.

Table 2-4 Funding models for SCF mechanisms (Adapted from Global Business Intelligence Corp, 2012)

Funding model	Description
Single bank, Single platform	One bank provides funds using its own proprietary platform or using a platform provided by its partner, a third-party platform provider
Multiple banks, Single platform (Lead bank with participating funders)	Only uses the platform of the lead bank. The participating banks provide additional source of finance
Multiple banks, Multiple platforms	Uses multiple banks in which each bank uses its own platform. Each bank is responsible for a specific list of suppliers.
A third-party platform provider partnering with single or multiple banks/funders	The focal firm chooses a third-party platform provider who provides a SCF platform and connects the focal firm and its suppliers with either single or multiple banks/funders
In-house developed platform using single or multiple banks/funders	The focal firm develops its own platform and utilises single or multiple external funders, often banks.

2.5 Common SCF mechanisms

SCF mechanisms included in this study are limited to financing arrangements funded by an external funder, commercial banks. Even though other external funders such as non-bank financial institution, fintech companies and logistics service providers have recently played an increasing role in providing SCF, commercial banks are still the key SCF providers. This study thus focuses on bank dominated SCF. Furthermore, SCF funded internally by supply chain members such as trade credit (funded by suppliers), and early payment discounting (funded by buyers), are not included. An exception is dynamic discounting which, despite being funded by buyers, is considered a variant of reverse factoring and thus is included.

The eight SCF mechanisms listed in Table 2-5 are commonly found both in the literature and in practice. Forfaiting, however, despite being included in the list produced by the Global SCF Forum (2016) is not included in this chapter because it is not a common mechanism in the

literature. It is also important to note that, due to a lack of consensus on the definition and scope of SCF (Global SCF Forum, 2016), there are other financing techniques that arguably can also be included under the umbrella term of SCF, such as bank payment obligation, and letters of credit (Euro Banking Association, 2014; Global SCF Forum, 2016). Those mechanisms, however, are beyond the scope of this study and thus intentionally excluded from this chapter. Likewise, some scholars include 'vendor-manged inventory', and 'consignment stock', two-supply chain collaborative solutions, under an SCF umbrella (Caniato et al., 2016; Gelsomino et al., 2016a). These two practices involve the optimisation of inventories by means of shifting inventory to the downstream partner (Caniato et al., 2016). However, since there is no flow of funding directly involved (one of the exclusion criteria discussed in Chapter 3), vendor-managed inventory, and consignment stock are not discussed here, and have not been included in the literature review (Chapter 3).

Table 2-5 Common SCF mechanisms and definitions (Adapted from Global SCF Forum, 2016)

Mechanism	Definition	Financing category
Purchase order finance	A loan provided for buying or processing of raw materials into finished goods.	Loan
Inventory finance	A loan provided for the holding or warehousing of goods.	
Receivable lending	A loan provided to suppliers using accounts receivable as collateral.	
Factoring	Suppliers sell receivables at a discount. Banks perform credit control and collection	Sale of accounts receivable
Invoice discounting	Suppliers sell receivables at a discount. Suppliers perform credit control and collection.	
Reverse factoring	Suppliers sell approved receivables at a discount on a non-recourse basis	
Dynamic discounting	The dynamic settlement of invoices for any payment before the due date in which the supplier grants to the buyer a pre-defined discount on the face value of the invoice (Gelsomino et al., 2016b).	
Distributor finance	Banks finance the distributor's purchases of goods from their corporate supplier.	

In the following sub-sections, the basic mechanics of the eight SCF mechanism are explained. These SCF mechanisms are simply categorised by the Global SCF Forum (2016) as either a bank loan or a sale of accounts receivable (See Table 2-5). The various categorisations of SCF mechanisms in the literature will be discussed in Chapter 3, and one of the main contributions of this study is in fact to identify a more fundamental way of categorising SCF practice than the literature currently offers.

The schematic diagrams in Sub-section 2.5.1 – 2.5.8 are purposely simplified to reduce unnecessary complexity. Thus, the only external funder shown in the schematic diagrams is a bank. In practice, however, and as discussed earlier in Section 2.4, there are other funders including non-bank financial providers and logistic service providers (Euro Banking Association, 2014). The diagrams also intentionally exclude, for the purpose of simplicity, technology platforms that may be used in these SCF mechanisms. In practice, SCF transactions can be manual, semi-automated or fully automated where IT-based or web-based platforms, often referred to as SCF platforms, have been increasingly utilised to facilitate quick and transparent transactions (as discussed in Section 2.4).

In addition to the eight mechanisms, the ninth and the last sub-section explains a business overdraft. Although an overdraft is neither included in the list of SCF mechanisms provided by the Global SCF Forum (2016), nor in the literature, it is one of the most popular working capital financing options used by businesses, especially the research participants – who are SMEs.

2.5.1 Purchase order finance

Purchase orders from a creditworthy corporate customer can be used by an SME supplier to secure a loan from a bank to pay its own suppliers (Reindorp et al., 2018). It is usually the most expensive form of finance due to its higher risk, compared to other practices, incurring both credit risk (where the customer fails to pay) and performance risk (where the supplier fails to supply) (Tanrisever et al., 2017). Banks may provide finance to the supplier in stages against raw materials purchases or work-in-progress (Global SCF Forum, 2016). Due to its high cost, firms often use purchase order finance in combination with factoring or invoice discounting in order to keep the duration of the loan short, and accelerate the pay-down of the loan (Tanrisever et al., 2017). As discussed in Chapter 5, this practice turns out to create other risks. Figure 2-3 explains the basic mechanics of purchase order finance.

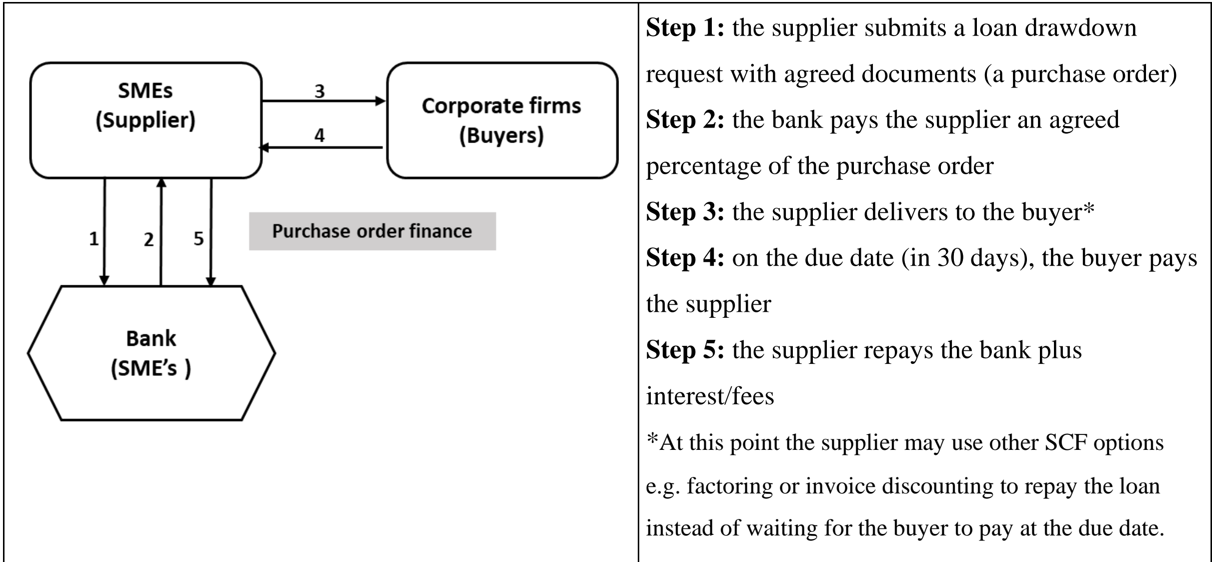

Figure 2-3 Basic mechanics of purchase order finance

Purchase order finance as explained in Figure 2-3 is a typical arrangement that involves mainly two parties, an SME and its bank, where the use of purchase orders as collateral can be either confirmed or unconfirmed by the buyer (Global SCF Forum, 2016). As will be discussed in

Chapter 3, in the literature purchase order finance can also involve three parties: an SME supplier, a buyer and the buyer's bank. The buyer provides the purchase order confirmation including quantities, delivery terms, and quality requirements (Tanrisever et al., 2017). This confirmed purchase order gives the SME supplier access to purchase order finance.

2.5.2 Inventory finance

Inventory finance or stock finance is a loan for holding goods, or inventory for re-sale whereby goods or inventory is used as collateral (Global SCF Forum, 2016). Similar to purchase order finance, inventory finance is costly compared to other SCF practices due to the need for revisiting and regularly monitoring the inventory (Commercial Capital LLC, 2020a). Figure 2-4 depicts the basic mechanics of inventory finance.

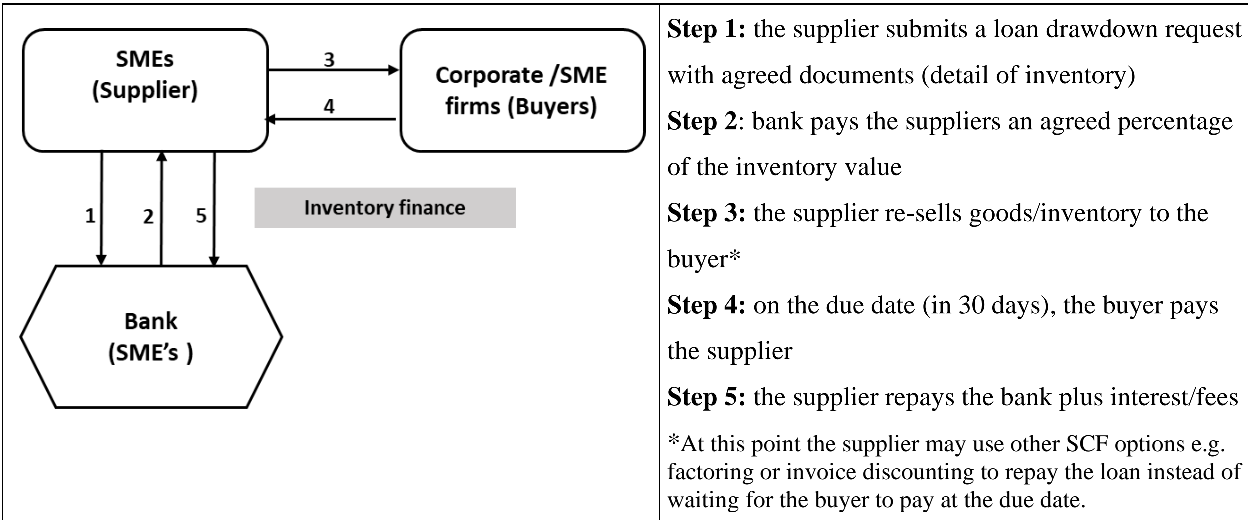

Figure 2-4 Basic mechanics of inventory finance

2.5.3 Receivable lending

Accounts receivable (unpaid invoices) are assets that can be used to secure finance with banks. Nonetheless, it should be noted that, due to the need for a supportive legal and regulatory

system, loans against receivable or receivable lending are mainly available in developed countries (Klapper, 2006), and this is also an issue that figures in the Findings in Chapter 5. In receivable lending contracts the supplier still owns the receivables and performs the collection of debt from the buyers in order to repay the bank. The bank typically lends up to 80% of the face value of the invoices, depending on the quality of receivables (Commercial Capital LLC, 2020c). The basic mechanics of receivable finance are shown in Figure 2-5.

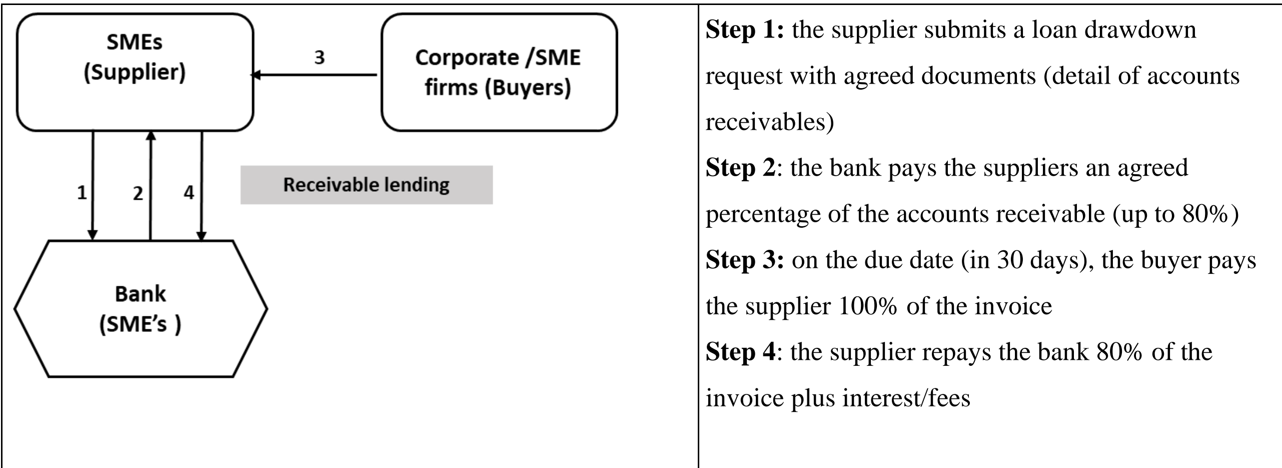

Figure 2-5 Basic mechanics of receivable lending

2.5.4 Factoring

Unlike the first three mechanisms, which are all classified as debt, factoring, invoice discounting and reverse factoring involve the purchase of receivables and thereby purchasing the right to the payment of the debts owed (UK Finance, 2021). Factoring is the primary source of working capital finance in many countries both in emerging and developed nations (Klapper, 2006). In 2019, the total global factoring volume was 2,917 billion Euro where Europe, including the U.K., accounted for about 68% of the total volume or 1,976 billion Euros (Factors Chain International, 2020). There are two types of factoring: recourse and non-recourse

factoring (Klapper, 2006). Factoring is frequently done without recourse in developed countries, and with recourse in developing nations (Klapper, 2006; Factors Chain International, 2020). Recourse factoring means the risk of default (i.e. the buyer is unable to make the required payment) is not transferred to the bank or factoring company and thus remains with the supplier (Global SCF Forum, 2016). In contrast, the risk is mostly transferred to the bank in non-recourse factoring (Global SCF Forum, 2016).

Banks or factors typically advance about 70-90% of the face value of the receivable (outstanding invoices) and hold the remaining 10-30% as a reserve to cover any deficiencies in the payment by the buyer (Klapper, 2006). Non-recourse factoring simply means suppliers do not have to return the advance amount of 70-90% to the bank but will not receive the remaining 10-30% of the invoice in case of default. Therefore, the supplier is not risk-free in factoring arrangements but rather shares in the risk with the bank in both recourse and non-recourse factoring (Klapper, 2006). Factoring arrangements include credit control and debt collection services which means they are typically more expensive than invoice discounting (Global SCF Forum, 2016). Factoring is more appropriate for small suppliers who may not have credit control and debt collection in place. Figure 2-6 gives a schematic representation of the factoring process.

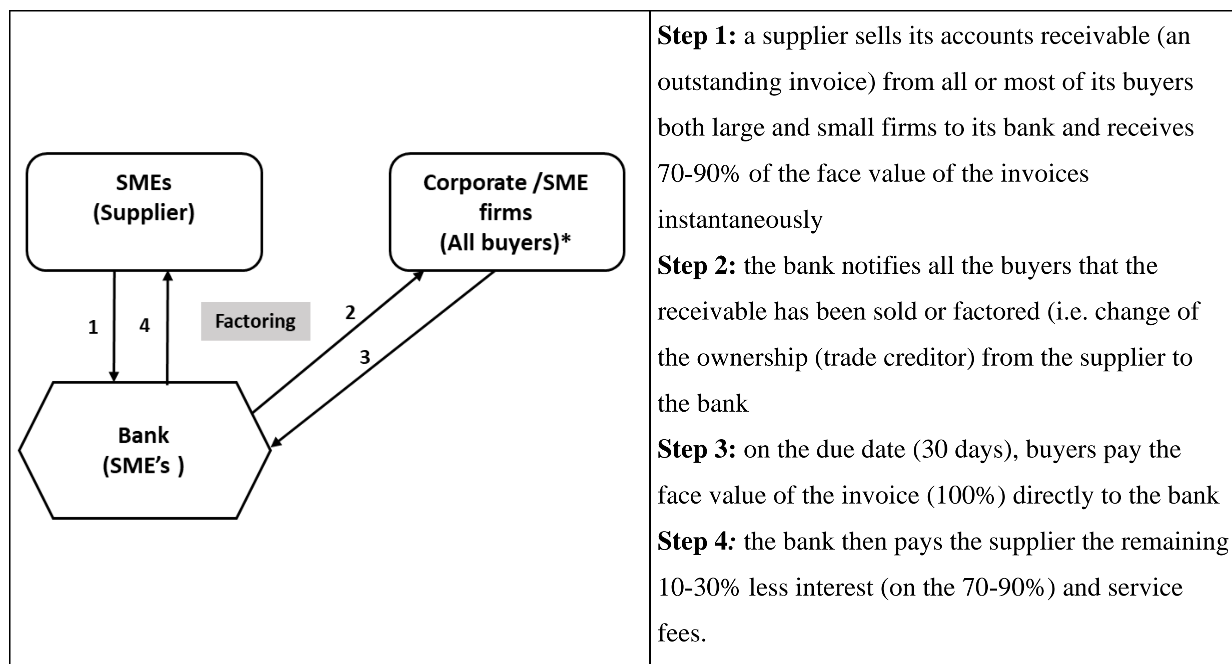

Figure 2-6 Basic mechanics of factoring

In conventional factoring, banks or factoring companies buy most, normally all, of the accounts receivable. In addition to this conventional factoring, there are two common variations ─ spot factoring and selective factoring (Global SCF Forum, 2016). The former is the purchase of a single invoice while the latter is the purchase of a few, selected customer's invoices (Global SCF Forum, 2016). Even though both arrangements give flexibility, they are more expensive than the conventional one due to the infrequency of transactions and the higher risks involved (Commercial Capital LLC, 2020b).

2.5.5 Invoice discounting

While factoring is the most common method of financing across all countries, in the UK invoice discounting is the most significant financing product both in terms of the volume of funding and number of users (UK Finance, 2021). Invoice discounting is one of the variations of factoring often offered to established suppliers who have credit control and debt collection

capabilities (Global SCF Forum, 2016). Invoice discounting is thus cheaper than factoring since supplier performs the credit control and debt collection directly. Unlike factoring, the buyers (the supplier's customers) are not notified about the change in ownership of the receivables. This undisclosed feature of invoice discounting makes it more desirable to SME suppliers, compared to factoring, when suppliers do not want their customers to know that they sell invoices. Disclosure emerges as in issue in the findings in Chapter 5. Figure 2-7 shows the basic mechanics of invoice discounting.

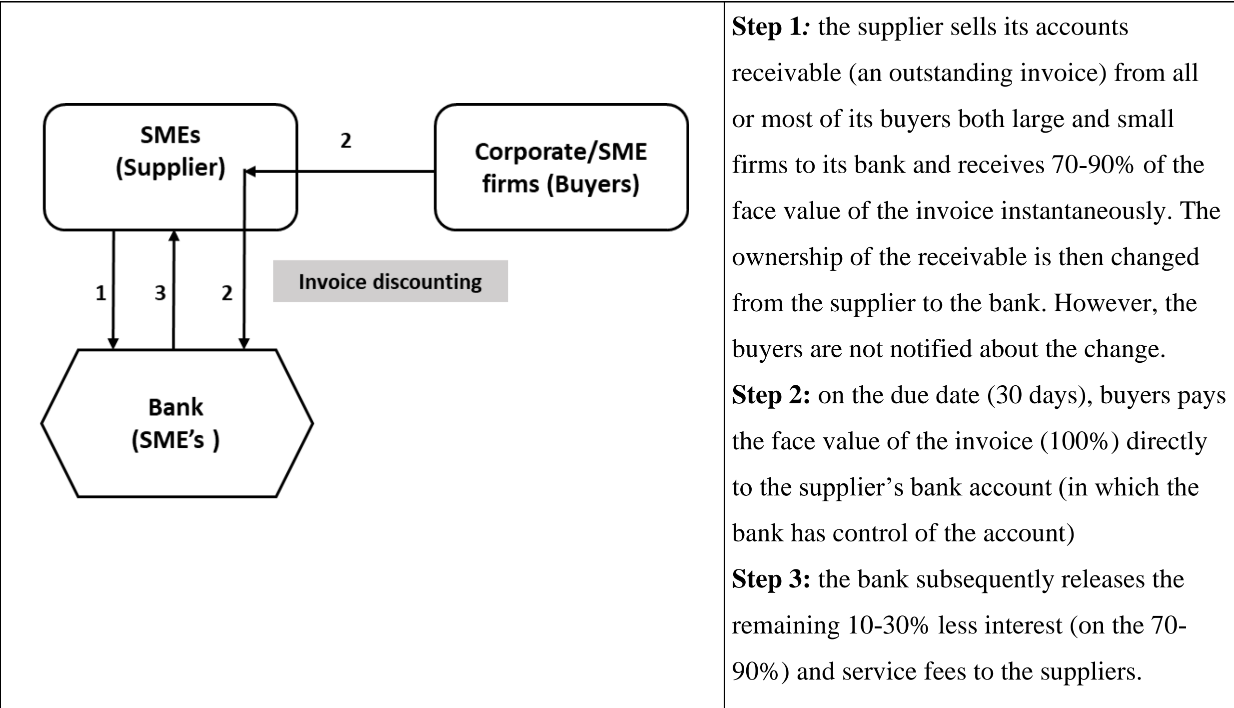

Figure 2-7 Basic mechanics of invoice discounting

2.5.6 Reverse factoring

Reverse factoring has evolved from factoring (Klapper, 2006). Reverse factoring, unlike factoring, needs to be initiated by the corporate buying firm to allow selected suppliers to sell approved invoices to the buyer's bank (Liebl et al., 2016). Thus, in reverse factoring

arrangements, SMEs only ‘participate’ rather than ‘adopt’, whereas they can ‘adopt’ other SCF mechanisms previously described, such as factoring and invoice discounting, because they can be the initiator in such arrangements.

The interest rate for reverse factoring is based on the corporate buyer's credit rating instead of the SME suppliers’ credit rating and is thus theoretically less expensive, compared to factoring or invoice discounting. (An interesting point in the Findings is that there are cases where it is not less expensive, and a supplier participates in reverse factoring for relational reasons rather than financing cost minimisation.) It is worth noting that reverse factoring is often confusingly referred to as ‘supply chain finance’ even though reverse factoring is, in fact, one of several SCF practices (Wuttke et al., 2013a). Other common terms used to refer to reverse factoring include ‘(approved) payable finance’, ‘supplier finance[1]’, and ‘confirming’ (Euro Banking Association, 2014; Global SCF Forum, 2016). The synonym ‘payable finance’, illuminates the fact that the mechanism deals with the accounts payable of the buyer rather than the accounts receivable of the suppliers (Global SCF Forum, 2016). Figure 2-8 presents the basic mechanics of reverse factoring.

[1] In the literature, supplier finance sometimes can also mean finance provided by suppliers to their buyer e.g. trade credit (see Yan et al., 2020)

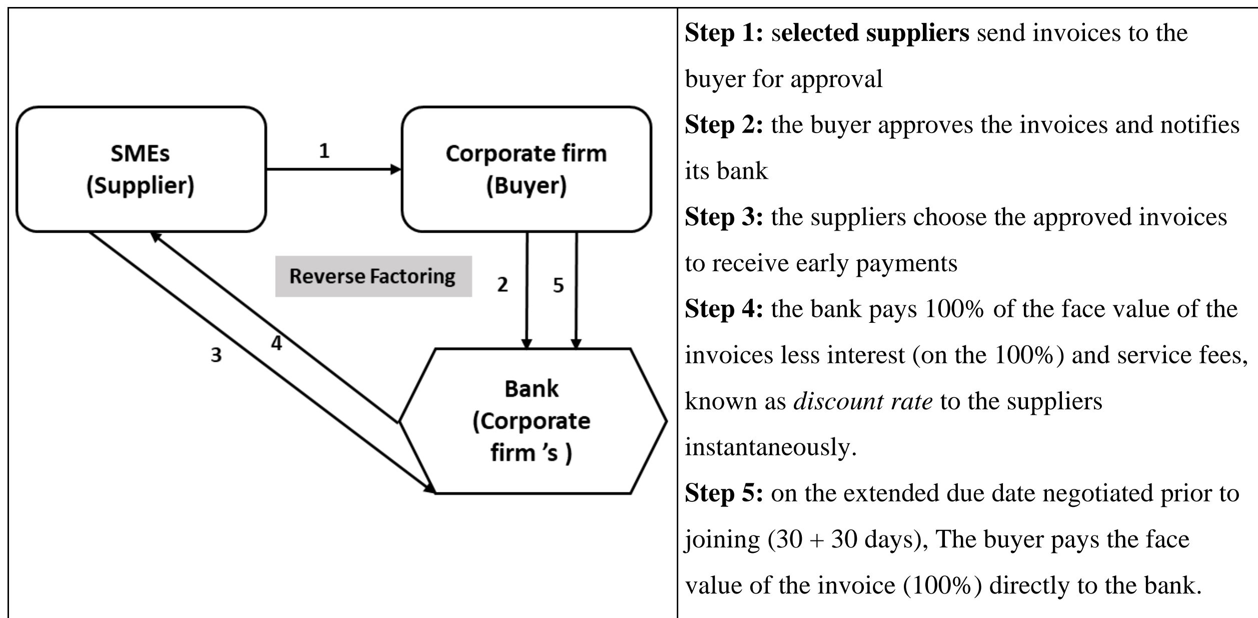

Figure 2-8 Basic mechanics of reverse factoring

It is essential to note that unlike factoring and invoice discounting, which are financing arrangements between a supplier and its bank to sell unpaid invoices from most or all of the buyers, reverse factoring is a financing arrangement between one corporate buying firm, its selected suppliers, and the corporate firm's bank(s) (which can be just one bank or several) (Global SCF Forum, 2016). Nevertheless, reverse factoring is similar to factoring regarding the disclosure of the sales of invoices, whereas invoice discounting is confidential: i.e. the sales of invoices are not revealed to the buying firms (Global SCF Forum, 2016). Moreover, reverse factoring is a non-recourse arrangement in the sense that the bank cannot pursue the supplier for payment. However, unlike non-recourse factoring and invoice discounting arrangements, in reverse factoring risk is 100% transferred away from the supplier receiving finance. This is because a non-recourse arrangement covers the risk of non-payment of the advanced amount, and the advanced amount of reverse factoring is 100% of the face value of the invoice, whereas only 70-90% is advanced in factoring and invoice discounting.

As discussed earlier in Section 2.4, an SCF arrangement, especially a more complex arrangement such as reverse factoring and distributor finance, may involve several SCF actors. Figure 2-9 depicts how reverse factoring can be funded by a combination of one platform provider and the funder(s). Examples of this reverse factoring scheme in practice include those offered to their suppliers by Walmart, Kohl's, Unilever, General Mills, and Rolls Royce (Global Business Intelligence Corp, 2012).

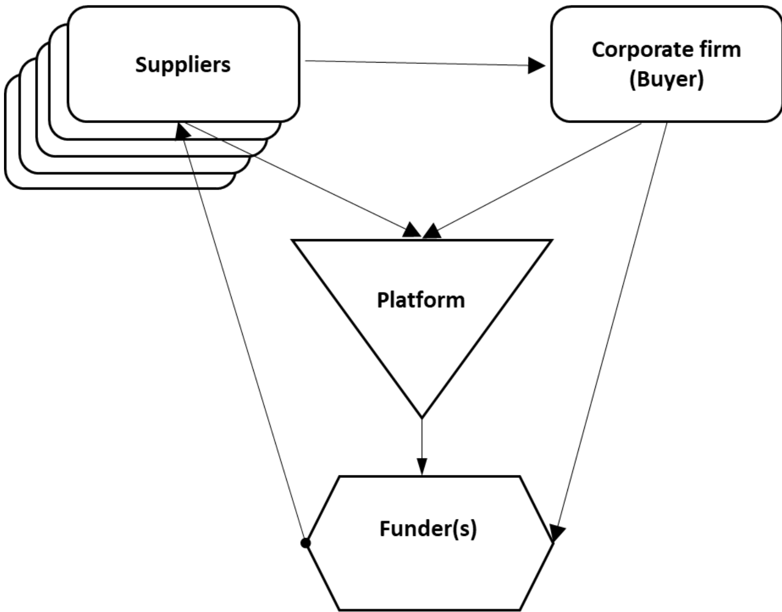

Figure 2-9 Reverse factoring funded by a combination of a platform provider and funder(s)

2.5.7 Dynamic discounting

According to the Global SCF Forum (2016), dynamic discounting is a variant of reverse factoring. Dynamic discounting is similar to conventional early payment discounting, aiming to encourage the buyer to pay before the due date in exchange for a predetermined discount. Early payment discounting is a one-off discount offered to buyers by a supplier in the form of two-part (payment) terms such as '2/10, net 30' which means payment of the invoice is due

within thirty calendar days, but if the buyer pays within 10 days a discount of 2% will be granted (Wu and Choi, 2005; My Credit Controllers, 2020). On the other hand, dynamic discounting uses a technology platform (i.e. an SCF platform) to facilitate the dynamic settlement of invoices in which suppliers can request an early payment at any point prior to the due date in exchange for a pre-defined discount (Gelsomino et al., 2016b). Figure 2-10 compares the two mechanisms of early payment discounting and dynamic discounting, showing how the discount rate (on the vertical axis) decreases with the payment delay.

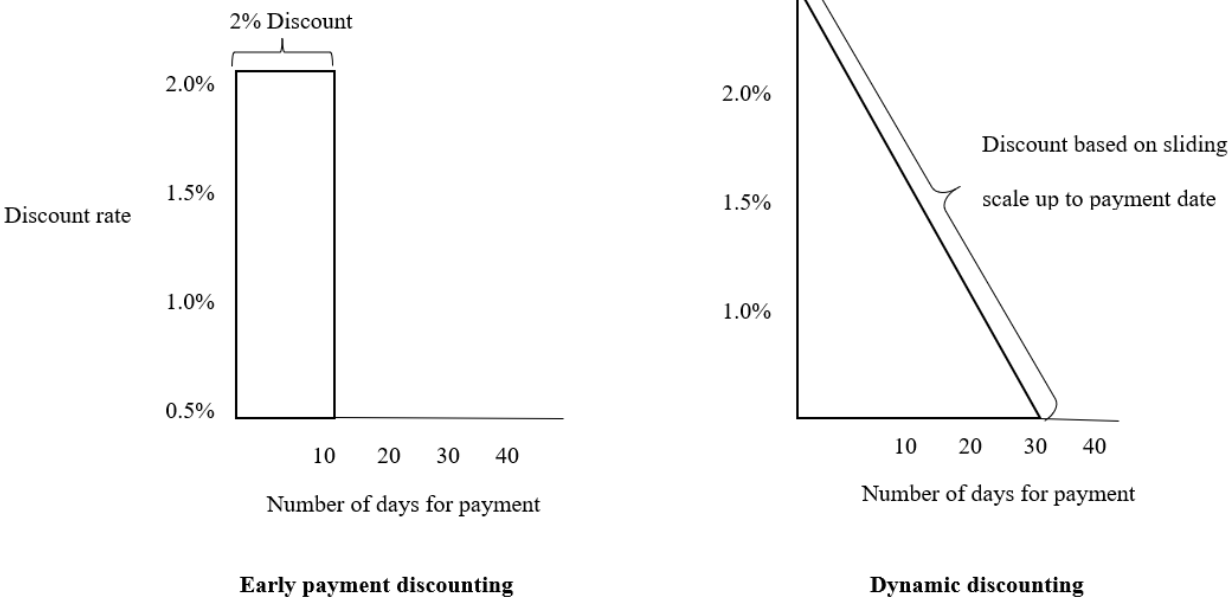

Figure 2-10 Early payment discounting (one-off) vs. dynamic discounting (C2FO, 2019)

Dynamic discounting as a variant of reverse factoring may be offered as a single arrangement or sometimes in combination with reverse factoring (Taulia, 2018; Kyriba, 2021). This is, however, typically offered by platform providers or FinTech firms such as Taulia and Kyriba rather than banks as shown earlier in Table 2-2. It is also important to note that both early payment discount and dynamic discounting schemes charge suppliers very high financing costs,

1% or 2% of the invoice value, equivalent to 18% or 36% APR (Annual Percentage Rate), respectively (Global Business Intelligence Corp, 2012), assuming normal payment terms of 30 days and a discount for payment within 10 days. Although dynamic discounting offers flexibility to suppliers to request early payments when needed, the cost of the discount, unlike an early payment discounting, is not fixed and primarily determined by the buyer (Global Business Intelligence Corp, 2012; C2FO, 2019).

2.5.8 Distributor finance

In contrast to reverse factoring, distributor finance is a supplier-initiated SCF mechanism where distributors or dealers (i.e. SME buyers) of a large manufacturer (i.e. a corporate supplier) receive a loan from the corporate supplier's bank to pay for finished goods inventory, while holding it for re-sale (Euro Banking Association, 2014). Since the corporate supplying firm initiates or engages in the contractual relationship, the SME distributors benefit from a lower working capital cost (interest and fees) offered by the corporate firm's bank (Global SCF Forum, 2016). Other common terms used to refer to distributor finance include receivables finance, buyer finance, and export finance. Figure 2-11 illustrates the basic mechanics of distributor finance.

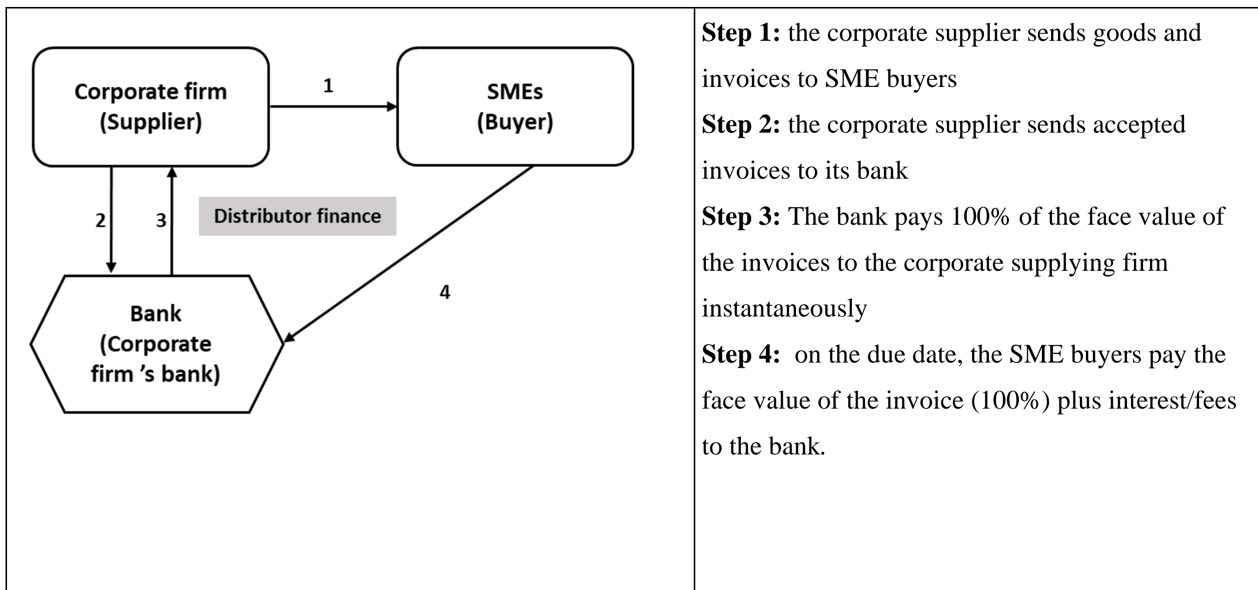

Figure 2-11 Basic mechanics of distributor finance

It can be seen that distributor finance is similar to invoice financing where inventory is used as collateral for loans. However, the former is a financing arrangement between a corporate supplying firm, its SME distributors, and the corporate's bank, while the latter is an arrangement between an SME supplier and its bank. Moreover, the loan received in distributor finance is paid directly to the corporate supplier. Distributor finance programmes can help extend payment terms for key customers (distributors) without impacting Days Sales Outstanding (DSO) for the seller. Similar to reverse factoring, distributor finance may involve several SCF actors. For example, DHL as a corporate seller provides distributor finance to its customers using a combination of TradeIX (platform provider), Standard Chartered (single funder), and AIG (credit insurer) (TradeIX, 2021). Figure 2-12 illustrates distributor finance as funded by a combination of a platform provider and funder(s) with an insurer providing insurance to cover credit risks. As explained in the Findings and Discussion, distributor finance shares a key kind of relational complexity with reverse factoring.

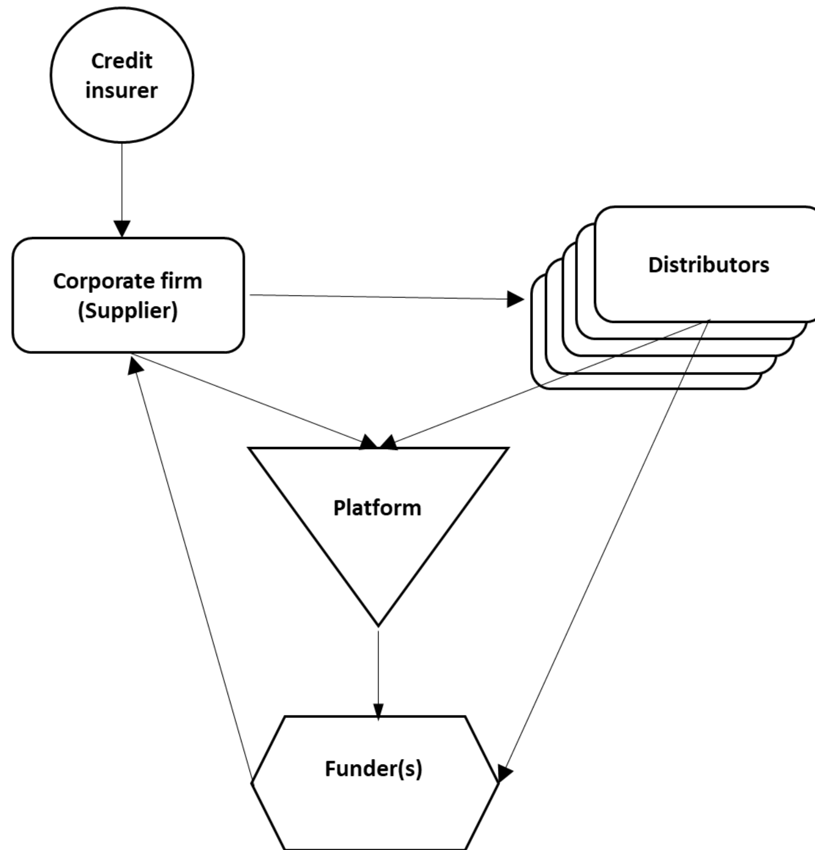

Figure 2-12 Distributor finance funded by a combination of a platform provider and funder(s)

2.5.9 Overdrafts

A bank overdraft has been used extensively by businesses, especially SMEs, to fund their working capital gap (Competition and Markets Authority, 2016). Even though overdrafts are not mentioned as SCF in the literature (the scope of SCF is somewhat arbitrary), this study includes overdrafts as one of the SCF mechanisms because, overdrafts are a popular financing option among SMEs (Hughes, 1997), even though they appear prohibitively expensive (Arndt, 1964). For instance, the annual interest rate could be 35.0% at Barclays (Barclays, 2020) and 39.9% at Nationwide (Nationwide, 2020).

A business overdraft is a pre-arranged short-term loan allowing firms to withdraw money up to an approved limit (HSBC UK, 2020). In contrast to fixed loans, where the borrowing happens once the money is in the business account and the interest is due instantly, the actual borrowing of overdrafts occurs when the money is withdrawn and interest is paid on the outstanding balance (Arndt, 1964). Benefits of overdrafts for businesses include flexibility and 'free-of-charge' cash available to manage liquidity (Arndt, 1964). Nonetheless, conventional overdrafts are costly and require collateral, such as tangible assets or a personal guarantee, to secure the loan (HSBC UK, 2020).

2.6 Similarities and differences among mechanisms

When considering a schematic representation of SCF mechanisms, there are two main types of structure. The first one is an open triad consisting of two interconnected dyads, and applies to purchase order finance, inventory finance, receivable lending, factoring, and invoice discounting. The other structure is a closed triad comprising of three interconnected dyads, and applies to reverse factoring and distributor finance. When considering open triadic SCF mechanisms, it is interesting to note that invoice discounting, purchase order finance, inventory finance and receivable finance have identical structures, where the SME supplier is at the centre of the arrangements connecting the financial flows between the corporate buying firm and the SME's bank (See Figure 2-13). However, the bank bridges the financial flows between the two supply chain actors in factoring contracts.

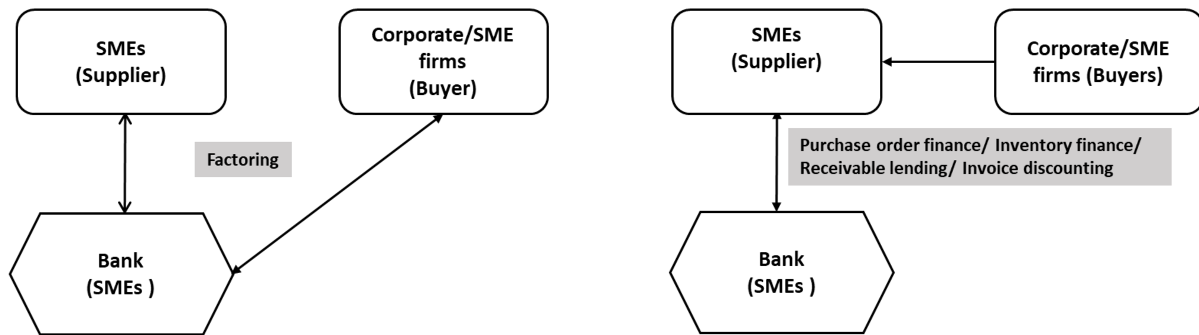

Figure 2-13 Open triad SCF mechanisms with two interconnected dyads

The two closed triadic SCF mechanisms, reverse factoring and distributor finance, are almost identical regarding structure and processes, but operate on opposite sides of a supply chain: the supply side (upstream), and demand side (downstream), respectively. It is clear from Figure 2-14 that the corporate firms connect the banks and the SMEs together. As will become evident in Chapter 5, this relationship structure is key to how supply chain actors think about SCF. Dynamic discounting as a variant of reverse factoring is not displayed here. As discussed earlier, the key difference is the source of finance, as reverse factoring is funded by the buyer, while dynamic discounting is funded by the buyer's bank. In dynamic discounting, a platform provider or fintech is the principal third actor instead of a bank.

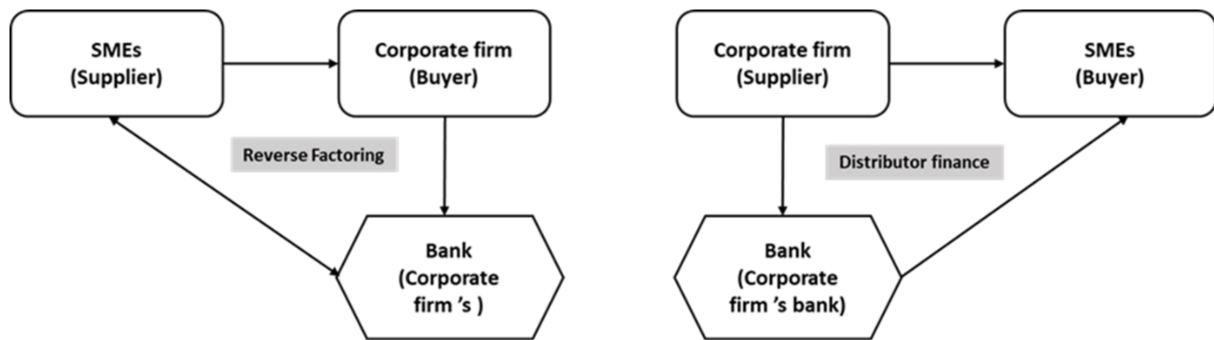

Figure 2-14 Two closed triad SCF mechanisms with three connected dyads

The key differences among the four SCF mechanisms, namely factoring, invoice discounting, reverse factoring, and distributor finance are summarised in Table 2-6. The first two practices, factoring and invoice discounting, are genuinely based on the purchase of accounts receivable, which is not considered a loan, while distributor finance is a loan against finished goods inventory (Global SCF Forum, 2016). Despite being classified as a bank loan, distributor finance is included in the comparison because it has an almost identical structure and set of processes to those of reverse factoring, such as presenting approved invoices to receive payment. The other loan-type SCF mechanisms, namely purchase order finance, invoice finance, and receivable lending, are simply loans, and therefore no further discussion is deemed necessary. Another mechanism, reverse factoring, is currently classified as the purchase of receivables as well (Global SCF Forum, 2016). Nevertheless, as discussed later in Section 2.8, there is an ongoing debate regarding whether it would be more appropriate to define it as a bank loan (Moody's, 2015; Jafari and Kalousova, 2018; Moody's, 2018; Global SCF Forum, 2020). This issue also turned out to be significant in the findings, as one of the participants described how questions about the accounting legitimacy of a reverse factoring scheme in which they participated led to its termination.

Table 2-6 Key similarities and differences among SCF mechanisms: factoring, invoice discounting, reverse factoring, and distributor finance

	Factoring	Invoice Discounting	Reverse factoring	Distributor finance
Parties directly involved	SME supplier, its bank, and buyers	SME supplier and its bank	Corporate buyer, its bank, and SME suppliers	Corporate suppliers, its bank, and SME buyers
Initiating party	SME supplier		Corporate buyer	Corporate supplier
Who owes the money to the bank?	Buyers and SME supplier		Corporate buyer	SME buyers
Who pays interest/fees?	SME supplier		SME suppliers	SME buyers
Recourse or non-recourse	Can be either 1) recourse: the supplier is liable for any deficiency in debt collection or default of buyers, or 2) non-recourse: the supplier is liable for the remaining (10-30%) only		Non-recourse (Suppliers are non-liable for any deficiency in debt collection or default of the buyer)	
Risk	Recourse: risk remains with the supplier Non-recourse: risk-free for the advance amount (70-90%) only		Risk-free for suppliers (100%), risk is totally transferred to the bank	Risk-free for the corporate supplier (100%), risk is totally transferred to the bank
Disclose to the trading partner?	Yes	No	Yes	
Involve payment terms extension?	No		Yes	Possible
Inclusion of receivables	All or multiple buyers		Single corporate buyer (selected suppliers only)	Multiple SME buyers (selected)
Operating system needed	Standardised (one system for all buyers)		Non-standardised (one system for one buyer)	Non-standardised (one system for one supplier)
Availability of money (Lead time)	After delivery		After being approved by corporate buyer	After being approved by SME buyers
Availability of money (% of the invoice)	70-90% instantly; the remain 10-30% less interest and fees is received after the buyer makes the payment		100% instantly	
Flexibility regarding withdrawn amount	Flexible (can withdraw any amount)		Inflexible (only allow to withdraw 100% of the invoice)	
Interest rate based on	Mainly buyers 'creditworthiness		Buyer's creditworthiness	SME buyers' creditworthiness plus the corporate supplier's (Thus, risk is reduced)

	Factoring	Invoice Discounting	Reverse factoring	Distributor finance
Financing cost (Interest and fees)	Relatively expensive	Less expensive than factoring	Less expensive than invoice discounting (in theory*)	Less expensive than loans based on the SME buyer's credit rating

* (See Iacono et al., 2015; Wu et al., 2019)

The following six sub-sections describe key similarities and differences between the four SCF mechanisms in more detail.

2.6.1 Parties directly involved and the initiating party

There are either two or three parties involved in the four SCF mechanism arrangements. In invoice discounting, the SME supplier bridges the financial flow between the buyers and the bank. In factoring arrangements, the SME's bank connects the other two parties, namely the SME supplier and buyers, whereas the corporate firms are the bridge between the banks and the SMEs in reverse factoring and distributor finance.

With regard to initiation, both factoring and invoice discounting are initiated by SME suppliers who arrange with their banks to sell their receivables (unpaid invoices) from all, or at least multiple, buyers. Conversely, reverse factoring and distributor finance are initiated by the corporate buying and supplying firms, respectively. The corporate firms initiate the SCF arrangements with their banks, which can be either one bank or several banks. Then the corporate firms select SME suppliers or buyers to join reverse factoring or invoice discounting, respectively.

2.6.2 Obligation and risk

With factoring and invoice discounting, although buyers owe money to the bank as the debtor, in the case of default the supplier is also liable for any deficiency in recourse contracts, or the remaining 10-30% of the face value of the invoice in non-recourse contracts. In contrast, the corporate buying firm and usually the SME buyers are the only parties who owe money to the bank in reverse factoring and distributor finance, respectively. The trade counterparties of the buying firm and the SME buyers have no liability in case of default. Interest and fees are paid by the SMEs in all four SCF practices.

Regarding risk, in recourse factoring and invoice discounting arrangements, risk remains with the supplier. While non-recourse contract suppliers are risk-free for the advance amount (70-90%), they still share the default risk for the remaining 10-30% with the bank. Reverse factoring is risk-free for the SME suppliers since risk is totally transferred to the bank, although there is a risk that the other parties will legally terminate the whole arrangement. Similarly, distributor finance is usually a risk-free contract for the corporate supplier since SME buyers take a specific purpose loan to pay for 100% of the goods.

In the process of carrying out the fieldwork, it became evident that in Thailand only recourse factoring is offered. In contrast, both recourse and non-recourse factoring as well as invoice discounting is offered in the UK. Nonetheless, many firms adopt recourse where risks remain with the SME firm. Non-recourse arrangements are not widely adopted since this is more expensive than recourse due to the higher risk for banks. It is crucial to note that non-recourse arrangements are not an absolutely ‘risk free’ solution with 100% of risk being transferred like RF. Rather, under non-recourse arrangements, SME firms are still liable for any uncollectible

debts for reasons other than the buyer's insolvency (e.g. commercial dispute) for the advance amount (up to 90%), while sharing the risk for the remainder with the bank. In addition, with non-recourse arrangements, banks may ask the SME firms to purchase bad debt or trade credit insurance where risks are then shared between the bank and the insurer.

2.6.3 Disclosure and payment extension

Factoring, invoice discounting, and reverse factoring arrangements lead to a change in the ownership (the trade creditor) of receivables, from suppliers to banks. Unlike invoice discounting, where the sale of an invoice is kept confidential, in factoring and reverse factoring the change of ownership is disclosed, or known to the buyers. This is because, in invoice discounting contracts, suppliers perform the credit control and collection themselves, whereas banks perform the debt-collection in factoring and reverse factoring (Global SCF Forum, 2016).

Another difference concerns payment extension. While factoring and invoice discounting do not involve extending payment terms, reverse factoring is often offered in exchange for a payment extension (Australian Small Business and Family Enterprise Ombudsman, 2020). This turns out to be a significant issue in the Findings, related to issues of power and control in supply chain relationships. Even though there is no evidence of payment extension in distributor finance arrangements, it may be negotiable between the parties involved.

2.6.4 Inclusion and operating system

The purchases of accounts receivable in factoring and invoice discounting typically includes multiple buyers, both large and small businesses, in order to diversify the risk of the buyers defaulting (Klapper, 2006). Likewise, distributor finance arrangements often include multiple

SME buyers selected by the corporate suppliers. In reverse factoring contracts, however, selected SME suppliers can only sell the invoices of just one buyer, the corporate firm, to the bank. This means that, if SME suppliers decide to participate in reverse factoring, they would need to have more than one reverse factoring contract or use reverse factoring concurrently with factoring or invoice discounting in order to cover multiple buyers. As a result, only one operating system is needed when using factoring, invoice discounting, or distributor finance whereas, for reverse factoring, suppliers will need to operate more than one system simultaneously. Even when signing up for two reverse factoring contracts (i.e. with two buyers), suppliers may end up using two different systems simultaneously, due to the lack of standardisation.

2.6.5 Availability of funds

In factoring and invoice discounting contracts, banks advance 70- 90% of the face value of the invoice within days, and pay the remaining 10-30% less interest (on the 70-90%) and service fees, once the full payment is received from the buyers at the due date (Klapper, 2006). On the other hand, the bank pays 100% of the face value of the invoice once the invoice is approved by the corporate buying firm in reverse factoring, and by SME buyers in distributor finance. In terms of flexibility, even though banks advance 70-90% of the invoice in factoring and invoice discounting arrangements, suppliers can choose to withdraw any amount needed of the available money up to this value, at any time point during the contract. This is important as the suppliers will pay interest according to the amount and duration of the withdrawn money. In contrast, reverse factoring only allows suppliers to withdraw 100% of the invoice at any point in time prior to the due date. This means suppliers must pay interest on the whole invoice value. Again, this issue of control over financing emerged as an important one in the Findings.

2.6.6 Costs

Since the interest rate for reverse factoring is based on the creditworthiness of the large buying firm, the financing cost (interest plus fees) should be, in theory, lower than with invoice discounting and factoring. Likewise, distributor finance, which benefits from the engagement of the corporate supplier, is less expensive than loans based on the SME buyer's credit rating. The financing cost of factoring is higher than invoice discounting since banks charge fees for performing credit control and debt collection services.

There are two main costs involved in factoring and invoice discounting: interest and fees. Table 2-7 provides an illustrative example of costs associated with factoring, invoice discounting, and reverse factoring. Typical interest charges range from 0.5% to 5% (CompanyDebt, 2018). Both factoring and invoice discounting arrangements charge an administration fee while an additional credit control management fee is charged for factoring contracts (CompanyDebt, 2018). Typical fees charged for factoring range from 0.75% to 2.5% of turnover (i.e. total invoice value being factored), compared to 0.2% to 0.5% of turnover for invoice discounting (CompanyDebt, 2018). A credit protection charge to cover the risk of bad debts, ranging from 0.5% to 2% of turnover is also applied to both types of contracts (CompanyDebt, 2018). The capital costs of factoring or invoice discounting may vary among different financial service providers (FSPs), and are typically negotiable. In contrast, reverse factoring is often charged at one rate, known as the discount rate. The discount rate depends mainly on the credit worthiness of the corporate buyers. For example, Carillion's suppliers were charged 2% of the invoice value (David, 2018). In simple terms, factoring can cost between 1.15% and 3.5% per month based on the line size (i.e. maximum available credit), industry, and the credit rating of the buyers (Commercial Capital LLC, 2020a).

Table 2-7 Illustrative example of financing costs associated with factoring, invoice discounting (CompanyDebt, 2018), and reverse factoring (David, 2018)

Receivables purchase	**Interest**	**Fee**		
		Administration	**Credit control management**	**Credit protection**
Factoring	0.5% to 5%	0.75% to 2.5% of turnover		0.5% to 2% of turnover
Invoice discounting		0.2% to 0.5% of turnover	-	
Reverse factoring	2%			

2.7 Late payment and the promotion of SCF

2.7.1 Late payment issues

In principle, paying small suppliers on time could help boost the annual UK economy by about £2.5 billion and keep 50,000 more businesses open (Federation of Small Business, 2016). However, late payments have been an ongoing issue in the UK (Federation of Small Business, 2016). There are several policy interventions aimed at solving this issue, such as the Late Payment Directive 2011/EU and the UK Prompt Payment Code (Federation of Small Business, 2016). The Late Payment Directive, which came into force in March 2013, requires public authorities to pay their suppliers within 30 days, while private companies must pay within 60 days (European Union, 2011). Nonetheless, a longer payment period is also permitted if it is agreed between the trading partners "providing it is not grossly unfair to the creditor" (European Union, 2011, p. 6). The UK Prompt Payment Code requires the signatories to pay 95% of invoices within 60 days, and to work towards payment within 30 days. Due to their unenforceability, both policy interventions appear not to have achieved the outcome of encouraging buyers to pay on time (Federation of Small Business, 2016; Global SCF Forum, 2020). Payment periods continue to lengthen, and about 60% of invoices issued by UK SMEs, worth more than £ 21 billion, were paid late (Federation of Small Business, 2016). In addition, trade credit contracts are often incomplete and small firms often have difficulties in enforcing

credit terms (Peel et al., 2000). Although suppliers can charge interest on late payments, about 80% of suppliers did not charge due to the fear of losing future contracts with large buyers (Federation of Small Business, 2016). The economic impact of late payments on small suppliers is summarised in Figure 2-15.

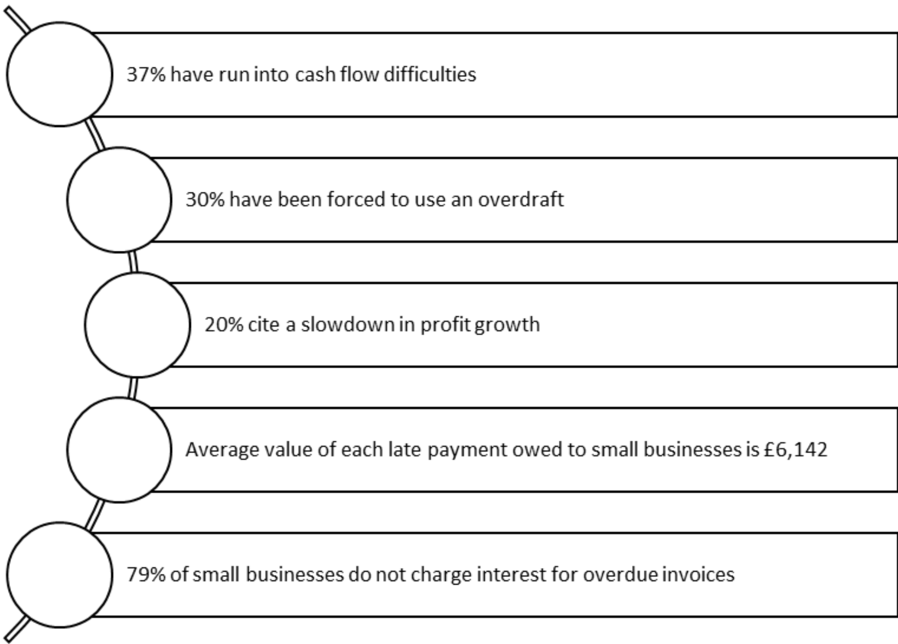

Figure 2-15 Economic impact of late payments on SMEs (Federation of Small Business, 2016)

In periods of financial distress, SMEs may have no other choice but to accept longer payment terms to win business (Paul and Boden, 2011). Yet extended payment terms pose a higher risk to SME suppliers and can lead to financial instability (Hofmann and Kotzab, 2010). Deferred payment by buyers can also affect service levels or the quality of products delivered (Hofmann and Kotzab, 2010). What is more, the cost incurred from extended payment terms will eventually be included in the cost of goods sold (COGS) (Hofmann and Kotzab, 2010). To bridge the working capital gap, SMEs can use the financing arrangements described earlier. But it is likely they simply use the same strategy of paying late with their suppliers. This domino

effect could exacerbate the problem for tiers further upstream, who may be even smaller and have more financial constraints, and therefore lead to general supply chain instability (Lamoureux and Evans, 2011).

2.7.2 The promotion of SCF

The UK government announced the SCF Scheme in October 2012 as an attempt to solve the late payment issue (Federation of Small Business, 2016). The scheme aimed to encourage large corporate firms to initiate SCF programmes to help boost cash flow for their SME suppliers (GOV.UK, 2012). According the Prime Minister at the time, David Cameron:

> "...In the current climate, viable businesses can struggle to get the finance they need to grow. This scheme will not only help them secure finance and support cash flow but will help secure supply chains for some of our biggest companies and protect thousands of jobs. It can be a win-win, with large companies and small suppliers both benefiting from this innovative scheme" (GOV.UK, 2012).

The SCF arrangement referred to in the government scheme is essentially only one mechanism — reverse factoring. This scheme, which was later referred to as an 'early payment programme', has been used by both local and central government procurement agencies since then. For example, the Pharmacy Earlier Payment Scheme (PEPS) is one of the government SCF programmes used by the NHS Business Services Authority (NHSBSA). The PEPS allows approximately 4,500 pharmacy businesses to get paid in a week in exchange for a discount, instead of waiting for eight weeks to be paid, for dispensing around 80 million NHS prescriptions each month (GOV.UK, 2012). In recent years, dynamic discounting, a variant of

reverse factoring described earlier, has also been added into the scheme, in which government agencies have an option to use their own funds to pay suppliers early for a discount instead of using money from external funders (i.e. reverse factoring).

The government claimed that the SCF scheme could open up £20 billion of inexpensive finance for suppliers, particularly SME suppliers. However, several finance experts warned that this scheme could worsen the late payment strategy used by large corporate firms (Hurley, 2012; Frances, 2018). This possibility, after the introduction of the 2012 SCF Scheme, was hugely exploited by Carillion to delay payment to its SME suppliers, as discussed further in Section 2.8 (Hurley, 2012). Other big firms such as Tesco and the 2 Sisters Food group were also found to be extending payment terms to 120 days after announcement of the SCF Scheme. Although there was no evidence in relation to the benefits of using the SCF Scheme, Tesco was among numerous large firms who agreed to support it. Furthermore, a buying firm in this scheme would only select important suppliers to join reverse factoring arrangements; this may have had an effect on unselected suppliers as the standard supplier payment terms for all suppliers were extended, not just those who had the benefit of reverse factoring (Hurley, 2012).

Similar to the UK SCF Scheme, in the US President Barack Obama announced the SupplierPay Initiative in July 2014. This initiative aimed to solve the problem of unfair long payment terms by encouraging large corporate buying firms to pay their suppliers more quickly, and also to help them gain access to low cost finance. The SupplierPay Initiative was modelled on the successful public sector QuickPay Initiative, which encouraged government departments to pay their suppliers within 15 days. The SupplierPay Initiative appeared to be successful after nearly fifty corporate companies signed up, agreeing to accelerate their payments to small suppliers

(The White House, 2014). Nevertheless, experts pointed out that the initiative did not achieve the intended result of reducing long payment duration and, in fact, the payment terms seemed to be lengthened even further (Gustin, 2016a).

2.8 The abuse and misuse of SCF

In recent years, SCF has been facing controversy around its accounting treatment and the way it has been used to benefit corporate firms. SCF in the form of reverse factoring has come under criticism as a tool for corporate firms to extend their suppliers' payment terms for their own working capital benefits (Australian Small Business and Family Enterprise Ombudsman, 2020; Wass, 2021). High-profile collapses of three corporate firms have occurred, at Abengoa S.A., Carillion, and NMC Health. These arose from the weight of debt they carried and from the use of reverse factoring to mask the true level of debt. Reverse factoring was recorded in the firm's accounts as "trade payables" rather than debt (Wass, 2021). Among these firms, Carillion, in particular, has turned the spotlight on the use of reverse factoring to unfairly extend supplier payment terms (Jafari and Kalousova, 2018; Global SCF Forum, 2020). The Australian Small Business and Family Enterprise Ombudsman (2020) ─ an independent advocate for small business owners ─ stated in their recent report that, although SCF is "a legitimate and effective product", helping suppliers to get paid earlier while allowing the buyer to free up working capital, there is a need to prohibit the use of reverse factoring to inappropriately extend payment terms.

In addition to the aforementioned high-profile collapses, the most recent crisis in SCF occurred at Greensill Capital in March 2021. Greensill was the largest non-bank SCF provider and had

a close connection with the UK government SCF scheme (Ramnarayan, 2021). The following sub-sections give a brief explanation of each of these four cases.

2.8.1 Abengoa S.A.

It is possible that reverse factoring contributed to the Spanish renewable energy company Abengoa S.A.'s announcement of pre-insolvency proceedings in late 2015 (Moody's, 2015; Gustin, 2016b). Unlike Carillion, Abengoa S.A explicitly disclosed the use of reverse factoring in its financial reports (Gustin, 2016b). About EUR 1.2 bn or 43% of its cash and cash equivalents were related to deposits for confirming (reverse factoring) debt (Moody's, 2015; Jafari and Kalousova, 2018). The firm also forced very long supplier payment terms i.e. 219 days in 2014 (Jafari and Kalousova, 2018). Due to the size of these reverse factoring contracts and their uncommitted nature, the abrupt cancellation of such contracts by the bank can lead to a liquidity crisis or collapse of the corporate firm (Global SCF Forum, 2020).

2.8.2 Carillion

A parliamentary committee described how:

> "Carillion's rise and spectacular fall was a story of recklessness, hubris and greed. Its business model was a relentless dash for cash, driven by acquisitions, rising debt, expansion into new markets and exploitation of suppliers" (Business Energy and Industrial Strategy and Work and Pensions Committees, 2018, p. 3).

Carillion, the second largest UK construction company went into compulsory liquidation in January 2018 with liabilities of approximately £7 billion (Business Energy and Industrial

Strategy and Work and Pensions Committees, 2018). Before its collapse, Carillion employed a total of 43,000 employees (19,000 in the UK), and it owed about £2 billion to its 30,000 suppliers (Business Energy and Industrial Strategy and Work and Pensions Committees, 2018).

Although Carillion was a major government supplier and had signed up to the Prompt Payment Code pledging to pay invoices within 60 days, the company actually forced standard supplier payment terms of 120 days on its SME suppliers after signing up to the government SCF Scheme (Frances, 2018). Carillion called the SCF Scheme an “Early Payment Facility” (EPF), which was used by 270 of its suppliers (Santander, 2018). Under EPF, suppliers could sell the approved invoices, in exchange for 2% of the invoice value, to the banks, including Santander and RBS (David, 2018). In Carillion’s 2014 annual report and accounts, the fact that the standard supplier payment terms were extended to 120 days was downplayed:

> “The introduction of Carillion’s Early Payment Facility (EPF) at the beginning of 2013 has also proved to be extremely popular with suppliers and is also helping us to build long-term relationships with our suppliers. Under the EPF, we are paying all suppliers on at least the same terms as they were on prior to joining the EPF and in many cases we are paying suppliers up to 20 days earlier, at no cost to suppliers. Also, suppliers can choose when they take payments in respect of approved invoices and if they wish to take them even earlier, they can do so at minimal cost, which is far less than their typical cost of borrowing” (Carillion, 2014, p.15).

Apart from exploitation of its suppliers, Carillion also used EPF or reverse factoring to conceal its debt of £498m, owed to the banks since 2013, by misclassifying it as ‘other debtors’ in the company’s balance sheets (Moody's, 2018). Although the EPF or reverse factoring arrangement meant the buying firm, Carillion, owed the money withdrawn by its suppliers to the banks, the

construction firm was not actually accounted for as a borrower by banks. There is still an ongoing debate on how to account for SCF in balance sheets, either as a trade payable, or as a form of debt (Moody's, 2018; Global SCF Forum, 2020). The absence of accounting standards has contributed greatly to the lack of explicit revelations about the use of SCF in financial reports (Global SCF Forum, 2020). A lack of transparency also means that SCF may be used to exploit suppliers, or disguise cash flow problems (Australian Small Business and Family Enterprise Ombudsman, 2020), as evidenced by the Carillion case.

2.8.3 NMC Health

Another case in relation to the hidden use of reverse factoring was a FTSE 100 healthcare provider, NMC Health. The company was forced into administration by its lender, Abu Dhabi Commercial Bank, in April 2020 after discovering suspected fraud and over $4bn in hidden debts. The hospital provider had 2,000 doctors, 20,000 medical staff, and 200 facilities providing treatments to over 8.5m patients a year (Kerr et al., 2020). The company has been investigated by the Financial Conduct Authority due to allegations of accounting irregularities (Partridge, 2020). The formal investigation revealed that NMC Health had accessed a $335m (£260m) reverse factoring facility since early 2018, without the knowledge of its board or without it being revealed in its financial reports (Partridge, 2020). More importantly, the company allegedly used fake invoices for medical supplies to withdraw money from banks under SCF programmes (Matt, 2020). The key feature of reverse factoring is to reduce credit risks through the confirmation of the supplier’s invoices. This became the loophole for the serious fraud when the medical suppliers Neopharma and Nexgen, owned by NMC, fabricated sales and falsified approved invoices (Kerr and O’Murchu, 2020).

2.8.4 Greensill Capital

Greensill Capital was the largest non-bank funder of SCF (Ramnarayan, 2021). The company's close connection with the former UK Prime Minister David Cameron has led to the current lobbying scandal in which Cameron allegedly used his personal contacts on behalf of the company. Greensill's connection to the UK government SCF scheme started when Greensill's founder became an advisor to the UK government on the scheme, and later the company provided funds for one of the government's SCF programmes ─ the Pharmacy Earlier Payment Scheme (Greensill, 2021). Although Greensill's collapse has not yet been connected to the abuse or misuse of SCF specifically, there are concerns of suspected fraud in financing arrangements with its largest customer, the steel empire GFG Alliance, to which it had a $5 billion exposure (Jones and Onstad, 2021).

Unlike traditional banks, Greensill arranged SCF programmes with corporate clients and subsequently repackaged and sold the loans as assets to investors (Wass, 2021). Funders in a reverse factoring arrangement typically gain only a small margin from a discount charge (interest and fees) paid by suppliers in exchange for an early payment. However, Greensill had the idea to repackage the debt into bond-like investments, which an investment bank like Credit Suisse then sold as funds to investors (Wilson, 2021). In this model, insurance played a critical role in making the funds almost risk-free to investors (Wilson, 2021). Failing to find insurers after the withdrawal of its main insurer, Tokio Marine, who had previously provided a $7.7bn coverage, Greensill could not sell off its loans or write new ones, leading to the company's collapse in March 2021.

In all, these recent scandals have produced a general level of scepticism or concern about supply

chain finance generally, but particularly more complex forms such as reverse factoring. As will be described in the Findings, this kind of context (especially legitimacy) emerges as an important influence on actors' thinking about SCF.

2.9 COVID-19 disruptions and SCF

Finally, it seems appropriate to briefly review the implications of the current pandemic to supply chain finance. COVID-19 has severely disrupted supply chains globally. The cancellation of orders, delayed payments, and causing defaults on outstanding invoices by buyers, has severely affected not only tier 1 suppliers but also lower-tier firms (Tang and Yang, 2020). Financial flow in such a crisis becomes a major challenge, in which financing is increasingly needed by businesses to fund their working capital gap and stabilise their operations, or simply stay afloat (Tang and Yang, 2020). SCF mechanisms can help supply chain members mitigate the disruptive impact of the COVID-19 and position themselves for post pandemic recovery (Hofmann et al., 2021).

Reverse factoring is one of the solutions that could help businesses, especially SME suppliers, during this unprecedented time. The Co-operative Group, one of the UK's largest food retailers, for instance, has recently initiated reverse factoring with Barclays Bank and its partners PrimeRevenue, a SCF platform provider, to help the Co-op's suppliers who may have been affected by COVID-19 (PrimeRevenue, 2020). Also, during the early stages of the pandemic, Britain's Treasury and Bank of England considered an emergency funding scheme to boost SCF programmes by amending the Covid Corporate Financing Facility (CCFF) to provide early payments for SME suppliers of large buying firms (Kleinman, 2020). However, caution is needed, as reverse factoring is an uncommitted financing arrangement in which banks may

withdraw from providing the early payment facility at any time, especially when the corporate buyer's creditworthiness may have deteriorated due to the pandemic (Global SCF Forum, 2020). Meanwhile, several corporate firms have recently been downgraded in creditworthiness, and this may impact on the reverse factoring programmes offered to their suppliers worldwide (Tang and Yang, 2020). Furthermore, as more corporate buyers, especially European ones, have turned to using SCF to pay suppliers during and in the aftermath of the coronavirus crisis, there is increasing concern among investors over the possible hidden debt being created (Ramnarayan and White, 2020).

2.10 Conclusion

This chapter has primarily used the grey literature to provide background for this thesis on the practice of SCF. It has discussed key SCF actors, the basic mechanics of common SCF mechanisms, and key similarities and differences among SCF mechanisms. In addition, two related topics of the working capital gap and trade credit have been briefly explained. The chapter closed with a discussion regarding government SCF initiatives to solve late payment issues and the high-profile collapses of four corporate firms in relation to the abuse and misuse of SCF. This material is important in explaining the implications of the data – for example the ways in which SME participants expressed concerns about their lack of control in specific SCF practices. It helps clarify a confusing terminology. And it provides an account of the recent historical background that many of the participants will have known about when describing how they understood and made decisions about SCF.

The next chapter, Chapter 3, will present a review of the SCF literature, in which research gaps are identified and the initial research question for this study is formulated.

Chapter 3 Literature review

3.1 Introduction

Supply chain finance (SCF) is an emerging research area that has gained increasing attention from supply chain scholars in recent years. Several special issues have called for more research on SCF (e.g. Birge, 2007; Rogers and Leuschner, 2015; Babich and Kouvelis, 2018; Choi and Ivanov, 2019; 2020; Chen et al., 2021). For example, in 2018, nine papers from over 70 submissions were selected for publication in the special issue on Research at the Interface of Finance, Operations, and Risk Management of *Manufacturing and Service Operations Management* (iFORM) (Babich and Kouvelis, 2018). Likewise, eight articles were selected for publication in the *Journal of Purchasing and Supply Management's* special issue in 2019 (Caniato et al., 2019). In 2020, another special issue on supply chain finance in the *International Journal of Production Economics*, entitled 'Latest Research Trends, Models, and Future Perspectives' yielded an additional 14 papers (Chen et al., 2020).

This chapter presents a review of the literature specifically addressing the interface of supply chain and finance. As there are already five recent reviews i.e. Gelsomino et al. (2016a); Xu et al. (2018); Bals (2019); Chakuu et al. (2019); Jia et al. (2020a) (discussed in the next section), including rather broad definitions and scope of SCF, covering the period of 1960 until 2018, this review aims to provide a view of the supply chain finance literature focusing in particular on key SCF practices, and factors influencing the decisions to adopt SCF – the broad subject of this thesis. It is important to note that although the organisation of this thesis appears conventional, the full review of the literature presented in this chapter had been postponed in keeping with grounded theory methodology ─ the choice of research approach for this PhD

study. This literature review was undertaken once the data collection had been completed and after the emergence of the core category, which will be discussed in detail in Chapter 5. Prior to data collection, nonetheless, a broad review of the literature was carried out to formulate the initial research question, develop interview guides, and importantly identify whether similar research had been conducted (Charmaz, 2006; Corbin and Strauss, 2015). In line with grounded theory, this broad review of the literature did not aim to derive a specific conceptual framework, but to explore the topic of SCF more generally.

The rest of the chapter contains a further eight sections as outlined in Figure 3-1. The chapter begins by briefly summarising the five previous systematic literature reviews. This is followed by the search procedure used for this review together with an overview of the included articles. Definitions and categorisations of SCF in the literature are then presented as well as a review of the use of methods and theories in the literature. Main focuses and key findings are then summarised and discussed. The penultimate section presents the main conclusions, i.e. that more empirical study is needed of parties other than the larger, corporate firms that typically initiate supply chain finance (SMEs and banks, primarily), and of parties that decide not to adopt or participate in SCF arrangements as well as those that do. The section that follows covers very briefly the literature that has emerged since the first draft of this thesis was written. The last section summarises the chapter and provides an overview of the next chapter.

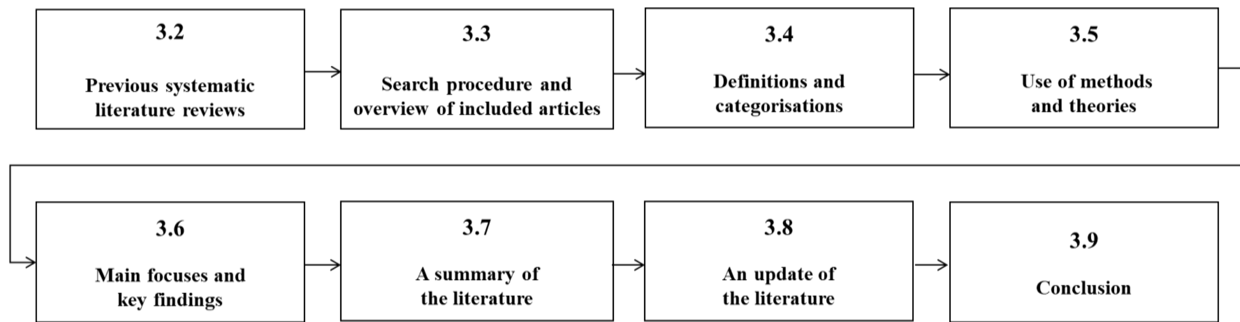

Figure 3-1 Flow of Chapter 3

3.2. Previous systematic literature reviews

There are five previous systematic literature reviews as shown in Table 3-1, in which the first is by Gelsomino et al. (2016b), and the most recent by Jia et al. (2020a). These reviews vary in terms of key search terms as well as inclusion and exclusion criteria. In brief, they review articles primarily from the supply chain and finance literature as well as related literature, such as trade credit and working capital management, from 1990 to 2018. Apart from these five reviews, there is another review of 151 Chinese-written papers between 2004 and 2014 which displays a growing interest in SCF as a research area in the important emerging Chinese market (Liu et al., 2015).

Table 3-1 Previous systematic literature reviews

Reference	Year covered	Papers included	Key search terms	Inclusion criteria
Gelsomino et al. (2016a)	2000-2014	119	SCF; financial supply chain; working capital optimisation; VMI; factoring; reverse factoring	Major logistics and SCM and the top finance and management journals, including the trade credit literature and proceedings
Xu et al. (2018)	1970–2016	348	Supply chain; Value chain; Inventory; Purchasing; Finance; Trade credit; Bank credit	Peer-reviewed academic journals AJG 3, 4, and 4* for content analysis (112 papers)
Bals (2019)	1960-2017	243	Working capital; Factoring; Inventory finance; VMI	Journal articles published in journals ranked either in the ABS list or in the VHB Jourqual list
Chakuu et al. (2019)	1995-2017	126	Supply chain; Finance; Operating models	Peer-reviewed academic journals selected papers rated from 2 to 4* (ratings based on Association of Business Schools (ABS) journal guide
Jia et al. (2020a)	2000-2018	71	Supply chain; Finance	Papers from an IPT perspective and included only papers focused on financing behaviour from a SC perspective

The five reviews provide extensive insights (for example, the great breadth and variety in supply chain finance mechanisms), and a comprehensive summary of previous SCF research. Nonetheless, differences in the use of search terms as well as inclusion and exclusion criteria yielded a different number of papers included in each review, which in turn has led to different themes and interpretations of the SCF literature. Although the main key search terms are ‘supply chain’ and ‘finance’, each of the reviews combines other specific SCF practices and/or SCF related topics, except for Jia et al. (2020a). This is perhaps due to inconsistencies in the definition and therefore scope of SCF. It can be seen that the three reviews covering the period prior to 2000, i.e. Xu et al. (2018), Bals (2019) and Chakuu et al. (2019), include far more

papers compared to the post 2000 reviews (Gelsomino et al., 2016a; Jia et al., 2020a). This is possibly because there was a lot of working capital and trade credit research occurring during this period.

The review by Gelsomino et al. (2016a) focusses mainly on SCF concepts and practices. The authors organise SCF into two perspectives: finance-oriented and supply chain-oriented. The finance-oriented perspective focuses on financial solutions offered by banks to fund two components of working capital i.e. account receivables and account payables, such as reverse factoring, factoring, and invoice discounting. The supply chain-oriented perspective emphasises collaborative working capital optimisation between supply chain partners covering all the three components of working capital: accounts receivable, accounts payable, and inventory (Gelsomino et al., 2016a). Since banks are considered unnecessary to the definition of SCF in the supply chain-oriented perspective, inventory optimisation is seen as an SCF practice, focusing on VMI (vendor managed inventory) and a shifting of inventory between supply chain members (Gelsomino et al., 2016a). Moreover, this perspective extends the boundaries of SCF to cover not only working capital financing but also fixed asset financing, e.g. pay per production solutions and joint investments (Gelsomino et al., 2016a). The authors identify four research gaps, namely lack of a general theory of SCF, weak empirical-based holistic studies of SCF applications, a lack of tools for selecting SCF mechanisms, and a need for more consideration of the impact of SCF on supply chain performance.

Xu et al. (2018) appear to cover a broader aspect of SCF. Their comprehensive review of SCF research identifies four research areas: 1) the effect of trade credit on optimal ordering or production quantity based on EOQ/EPQ, 2) inventory decisions under trade credit policy based

on a more complex or extended EOQ/EPQ models, 3) the interaction between replenishment decisions and delayed payment strategies, and 4) how financing options (bank credit or trade credit) affect operational and financial decisions in a supply chain.

In the third review, Bals (2019) develops an SCF framework based on the business ecosystem concept. This framework comprises eight dimensions: supply chain collaboration, organisation, financial, technology, market and regulation, product, stakeholder, and lifecycle.
For each dimension, the authors have proposed a future research agenda. This includes for example for the supply chain collaboration dimension, examining the impact of lock-in on stakeholders, while a study of SCF from the perspectives of suppliers and financial institutions is proposed for the stakeholder dimension. The latter proposal in particular fits with the subject of this thesis.

The fourth review by Chakuu et al. (2019) analyses the relationship between SCF actors, mechanisms, and factors affecting the relationship. The authors identify three archetypes of SCF mechanism in their systematic literature review, namely fixed asset-centric, inventory-centric, and buyer-centric/supplier-centric. The second and third archetypes have been previously identified by the Euro Banking Association (2014) as discussed earlier in Chapter 2. These categorisations focus on either the initiating party (the buyer or supplier), or type of working capital to be financed (inventory, receivables, or payables) (Chakuu et al., 2019). It is worth noting that even though some scholars include fixed asset financing as SCF (Gomm, 2010; Chakuu et al., 2019), the scope of SCF in this thesis only covers short-term financing or working capital financing, which is in line with most other scholars and practitioners.

Lastly, the most recent review by Jia et al. (2020a) is rather different from the others. The authors demonstrate how SCF providers deal with uncertainties (task characteristics, environment and independence of SCF tasks), and develop capabilities. They assert that uncertainties explain the need for a focus on information processing in particular. To improve information processing capacity, there is a need to enable better organisation structure design, coordination and control, as well as information technology to support SCF arrangements (Jia et al., 2020a).

Compared to the five previous review articles, the review of the literature that follows in this thesis shows some similarities with two previous reviews: Xu et al. (2018) and Gelsomino et al. (2016a). Firstly, the results show that about a quarter of the papers that I review are concerned with how financing options affect operational and financial decisions in a supply chain, and so are in line with one of the four research areas identified by Xu et al. (2018). However, financing options available for the financially constrained party in Xu et al's review are limited to trade credit and bank credit due to their choice of search terms, whereas my review embraces broader financing options including buyer financing, LSP (logistic service provider) financing, and e-business platform financing. Additionally, findings from my review are in line with the review by Gelsomino et al. (2016a) who classify definitions and scope of SCF as coming from either finance-oriented or supply chain-oriented perspectives. Their review displays the increasingly significant roles of banks and LSPs as funders in which the financing of inventory is not limited to taking place between supply chain members only (e.g. VMI), but can be funded by banks or LSPs as well. In other words, unlike Gelsomino et al. (2016a), who exclude inventory from their finance-oriented perspective SCF, my review shows that all the three components of working capital (accounts receivable, accounts payable, and inventory)

can be funded by banks (i.e. finance-oriented) as well as by supply chain members (i.e. supply chain oriented).

Of particular interest, my review indicates the need for more empirical-based holistic research of SCF applications, and for a general theory of SCF, identified by Gelsomino et al. (2016a). These needs are both addressed in this thesis by studying the application of SCF both upstream and downstream using a grounded theory approach, which aims to derive theories grounded in the collected data.

3.3 Search procedure and overview of included articles

While this review was not a fully systematic literature review, the search procedure and results are briefly explained below for the sake of transparency. Business Source Complete, the most common database in the business and management field, was chosen as a primary database for the review. Additional searching for specific SCF practice papers was performed on Google Scholar. Searching was performed on 5th October 2020 covering articles from the year 2000 onwards when the term 'SCF' first appears in the literature (Xu et al., 2018).

Search results yielded a total of 180 peer-review articles. It can be clearly seen from Figure 3-2 that the number of SCF articles have gradually increased during the last two decades, especially the last two years, which show a dramatic rise in published SCF papers. The year with the highest number of publications was 2019 (45 papers). It can be expected that by the end of 2020, the number of published papers in 2020 might exceed that of the preceding year ─ an update of the literature search can be found in Section 3.8.

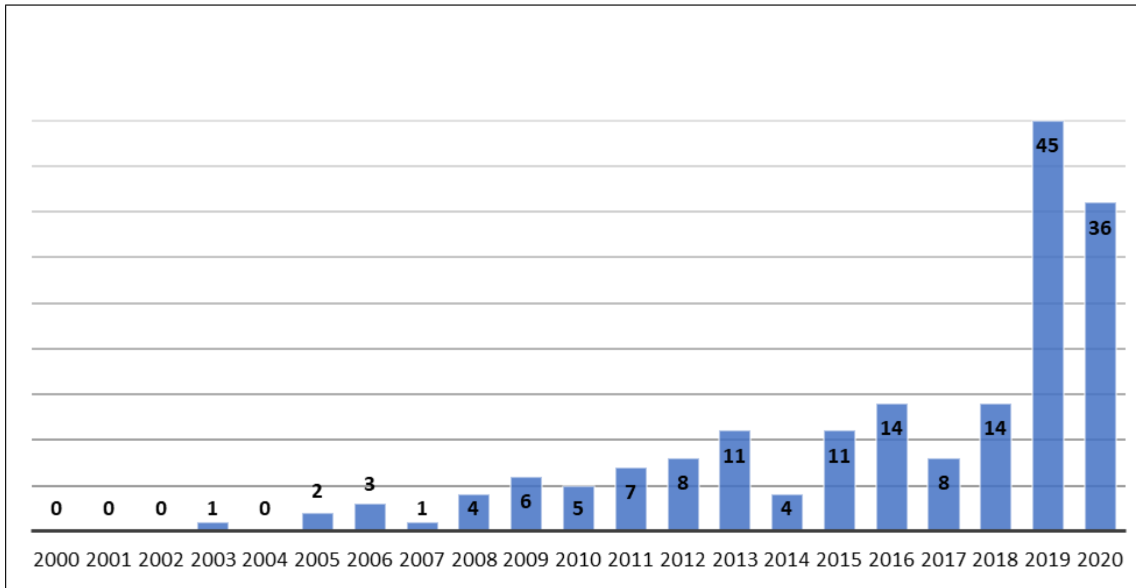

Figure 3-2 Number of SCF articles in the past 20 years

The emphasis of the review in this thesis is on SCF studies in the supply chain management literature, as this is the body of literature the thesis intends to contribute to. The focus is primarily on the perception and adoption decisions of key SCF practices. Thus, the key search terms for this review were rather specific. Essentially, these are similar to Gelsomino et al. (2016a), including the following terms: 'supply chain financ*'; 'financial supply chain', and 'reverse factoring'. Broad search terms such as 'working capital optimisation' and 'VMI' were excluded. Key search terms, inclusion and exclusion criteria used in this review are illustrated in Figure 3-3.

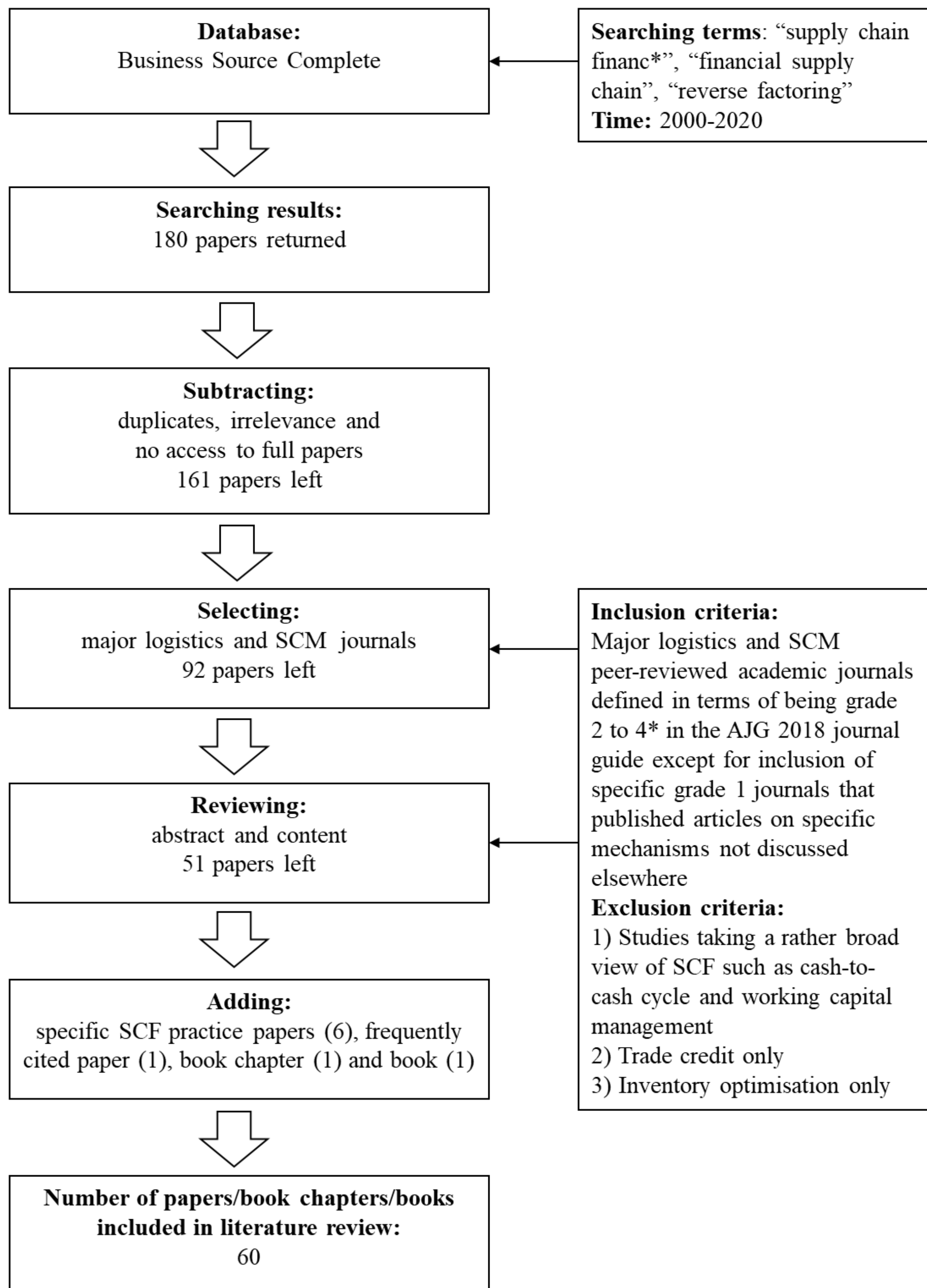

Figure 3-3 Selection procedure (Key search terms, inclusion and exclusion criteria) for database: Business Source Complete

Papers were *excluded* if they focused specifically on inventory optimisation, trade credit, working capital or cash flow management and cash-to-cash cycle. Papers were *included* if they considered trade credit as one of several SCF options, and inventory optimisation taking available financing options into consideration. Papers that only mentioned SCF in passing were excluded. Table 3-2 provides more information on how papers were selected using inclusion and exclusion criteria.

Table 3-2 A Detail of inclusion and exclusion criteria

Selection criteria	Included	Excluded
Inventory optimisation only		√
Inventory optimisation taking available financing options e.g. bank credit, buyer finance, supplier finance, etc. into consideration	√	
Trade credit only		√
Working capital or cash flow management only		√
Cash to cash cycle only		√
Financial supply chain	√	
Papers focused on specific SCF practices	√	
Papers focused on finance in general		√

Additional searching for specific SCF mechanism papers was also performed on Google Scholar. As well as using the key search terms (‘supply chain financ*’; ‘financial supply chain’, and ‘reverse factoring’), further search terms were used, including, ‘factoring’, ‘invoice financ*’, and ‘purchase order financ*’, to include SCF practices discussed in Chapter 2 that may have been omitted using only the key search terms. After reviewing the papers using the same inclusion and exclusion criteria as the Business Source Complete database (Table 3-2), six from a total of 13 papers were identified. Full details of search terms and findings are listed in Table 3-3. Two SCF practices, receivable lending and invoice financing, were only mentioned but not investigated in depth in any previous studies. For the receivable lending, this

is expected as it is not commonly used in practice, as discussed earlier in Chapter 2. Receivable lending was also not mentioned by any of the interview participants during the fieldwork. On the other hand, invoice discounting is rather well known among UK interview participants; however, for the additional SCF practice search, it was only mentioned once, with factoring, and included in one open access paper in which the focus is on blockchain rather than invoice discounting.

Table 3-3 14 papers from the specific SCF practices search in Google Scholar

	Search terms	Reference	Journal
Included	Inventory finance	Hofmann (2009)	International Journal of Physical Distribution and Logistics Management
		Chen and Cai (2011)	European Journal of Operational Research
		Chakuu et al. (2020)	International Journal of Operations and Production Management
	Inventory finance and Receivable finance	Buzacott and Zhang (2004)	Management Science
	Purchase order finance	Reindorp et al. (2018)	Operations Research
		Tanrisever et al. (2017)	Foundations and Trends in Technology Information and Operations Management
Excluded	Factoring	Smith (1994)	Journal of Corporate Finance
		Soufani (2001)	Journal of Small Business and Enterprise Development
		Soufani (2002)	Journal of Economics and Business
	Factoring and Invoice discounting	Walker (1996)	Credit Control
		Soufani (2000)	Journal of Small Business and Entrepreneurship
	Factoring and Reverse factoring	Klapper (2006)	Journal of Banking and Finance
	Invoice discounting	Fabrizio et al. (2019)	Frontiers in Blockchain

Together with six additional papers identified from Google Scholar database, one journal paper (Pfohl and Gomm, 2009), one book chapter (Hofmann, 2005), and one book (Templar et al.,

2016) were later added to the literature review as they were frequently cited, in particular for SCF definitions and categorisations. A total of 58 papers, one book chapter and one book were finally included in this review. Countries contributing to SCF literature included China, India, Germany, and Switzerland. The highest number of papers (n=14) was found in the International Journal of Production Economics. Other journals contributing five or more articles were the International Journal of Physical Distribution and Logistics Management, European Journal of Operational Research, and Journal of Purchasing and Supply Management. Table 3-4 shows articles included in the literature review by journal.

Table 3-4 Distribution of articles including in the literature review by journals

Journal	**No of papers/book chapters/books**
International Journal of Production Economics	14
International Journal of Physical Distribution and Logistics Management	7
European Journal of Operational Research	6
Journal of Purchasing and Supply Management	5
Supply Chain Forum: An International Journal	3
Business Process Management Journal	2
Industrial Management and Data Systems	2
International Journal of Logistics: Research and Applications	2
International Journal of Operations and Production Management	2
International Journal of Production Research	2
Management Science	2
Manufacturing and Service Operations Management	2
Supply Chain Management: An International Journal	2
Journal of Business Logistics	1
Journal of Operations Management	1
Operations Research	1
OR Spectrum	1
Production and Operations Management	1
Foundations and Trends in Technology Information and Operations Management	1

Journal	No of papers/book chapters/books
One paper, one book chapter, and one book that were later added are listed below	
Logistics Research	1
Logistik Management - Innovative Logistikkonzepte	1 (Book Chapter)
Financing the end-to-end supply chain: A reference guide to supply chain finance	1 (Book)
Total papers/book chapters/books included in the literature review	**60**

In the remainder of this review, I discuss what I identified from the reviewed papers i.e. the definitions they use, their methods, theories and findings. Although this involves some categorisation, consistent with grounded theory analysis there is no attempt at a thematic analysis and synthesis – for example of the kind carried out by Chakuu et al. (2019).

3.4 Definitions and categorisations of SCF in the literature

3.4.1 Definitions

Not many SCF scholars clearly define SCF. Instead, many authors implicitly define SCF as the provision of financing options available for capital-constrained supply chain members, either suppliers, buyers or both (e.g. Gao et al., 2018; Huang et al., 2019b; Wang et al., 2019; Huang et al., 2020, etc). Some definitions of SCF currently available in the literature exhibit a great deal of inconsistency, as discussed by practitioners in Chapter 2 (Euro Banking Association, 2014; Global SCF Forum, 2016). Table 3-5 presents some existing definitions of SCF in the literature, along with financial supply chain (FSC) which is often used interchangeably with SCF. It is worth noting that some scholars, on the one hand, maintain that there is little difference between the definition and scope of FSC and SCF (Gelsomino et al., 2016a). FSC generally focuses on the flows of cash and related information between supply chain members, including a financial service provider (FSP), e.g. a bank (Blackman et al., 2013; Wuttke et al.,

2013b; Silvestro and Lustrato, 2014), while SCF emphasises the financial resources and financing relationships between supply chain members and FSP (Wandfluh et al., 2016). On the other hand, some scholars, e.g. Liebl et al. (2016) and Silvestro and Lustrato (2014), argue that SCF is better regarded as a subset of FSC. According to Silvestro and Lustrato (2014), FSC encompasses two activities: 1) payments for products or services; and 2) SCF, which is the financing of production and trade activities from production, inventory, goods in transit through to invoice. In other words, SCF involves only the financial flows needed in addition to revenues to deal with the working capital gap described in Chapter 2.

Table 3-5 Some existing definitions of SCF and FSC

Supply chain finance (SCF)	
Hofmann (2005, p. 3)	"Located at the intersection of logistics, supply chain management, collaboration, and finance, Supply Chain Finance is an approach for two or more organizations in a supply chain, including external service providers, to jointly create value through means of planning, steering, and controlling the flow of financial resources on an inter-organizational level"
Pfohl and Gomm (2009, p. 151)	"the inter-company optimisation of financing as well as the integration of financing processes with customers, suppliers, and service providers in order to increase the value of all participating companies"
More and Basu (2013, p. 625)	"managing, planning and controlling all the transaction activities and processes related to the flow of cash among SC stakeholders in order to improve their working capital"
Wandfluh et al. (2016, p. 202)	"buyer–supplier financial collaboration as the cross-company alignment of financing processes, strategy and decisions as well as the sharing of required information in order to improve the financing efficiency and effectiveness in a supply chain dyad"
Financial supply chain (FSC)	
Blackman et al. (2013, p. 133-134)	"the network of organisations and banks that coordinate the flow of money and financial transactions via financial processes and shared information systems in order to support and enable the flow of goods and services between trading partners in a product supply chain"
Wuttke et al. (2013b, p. 773)	"optimized planning, managing, and controlling of supply chain cash flows to facilitate efficient supply chain material flows"
Silvestro and Lustrato (2014, p. 300)	"running parallel to the physical supply chain, is the flow of cash from firm to firm – including expenses, receipts, and investments – as well as the processes put in place to engage and interact with trading partners from a financial perspective"

It can be clearly seen that the definitions of SCF and FSC are close. While some of the definitions are rather descriptive (e.g. Blackman et al., 2013; Silvestro and Lustrato, 2014), some are normative (Pfohl and Gomm, 2009; Wuttke et al., 2013b; Wandfluh et al., 2016) – claiming that SCF specifically involves ‘optimisation’, ‘efficiency’ etc. Although there are several definitions, they share certain characteristics. First, there are always either two types of party, suppliers and buyers (See Hofmann, 2005; Pfohl and Gomm, 2009; More and Basu, 2013; Wandfluh et al., 2016), or three types of party, including external funders such as financial service providers or logistics service providers, in SCF arrangements (See Hofmann, 2005; Blackman et al., 2013; Martin and Hofmann, 2019). Second, SCF relationships place emphasis on coordination and information sharing between the interconnected parties (Hofmann, 2005; Blackman et al., 2013; Wandfluh et al., 2016). These issues turn out to be important in the data obtained for this thesis, discussed in Chapter 5. Third, there is a clear link between SCF or FSC and the physical supply chains (Blackman et al., 2013; Wuttke et al., 2013a; Silvestro and Lustrato, 2014). It is this link that makes SCF an important topic for supply chain scholarship as much as for the field of finance. Lastly, SCF encompasses the optimisation of both cash flow specifically and working capital more generally, which emphasises the intimate connection between operations and finance processes (More and Basu, 2013; Wuttke et al., 2013a).

Another term often used interchangeably with SCF is reverse factoring (RF) – a specific financing mechanism outlined in the previous chapter (Gelsomino et al., 2016a; Bals, 2019). RF involves receivables purchase, in which a corporate buying firm initiates the arrangement with its bank or banks to purchase approved invoices (i.e. accounts receivables) from selected suppliers at discount. RF is one of several SCF practices that involve receivables purchase described earlier in Chapter 2 including factoring and invoice discounting, so it seems

misleading to use the term RF synonymously with SCF (Iacono et al., 2015; Gelsomino et al., 2016a). Nonetheless, the fact that several researchers and practitioners still use the term RF to refer to SCF and vice versa (e.g. Wuttke et al., 2013a; Iacono et al., 2015; Lekkakos and Serrano, 2016; Wuttke et al., 2016; Wuttke et al., 2019) shows how significant the practice of RF specifically is seen to be in the literature. In this PhD study, FSC is used interchangeably with SCF but RF is clearly identified as just one of several SCF practices. As demonstrated in the Findings this is important, because firms engaging in RF will almost certainly have to do so in combination with other SCF practices.

3.4.2 Categorisations

Inconsistent definitions and scoping of SCF or the lack thereof have led to several categorisations of SCF in the literature, following attempts by scholars to group or classify the numerous SCF practices. First, SCF is categorised according to who is the provider of finance. This is mainly found in modelling or simulation papers concerning inventory optimisation (e.g. Raghavan and Mishra, 2011; Huang et al., 2020; Yan et al., 2020). Four main categories can be identified, namely supplier financing (i.e. trade credit), buyer financing, bank financing, and logistics service provider (LSP) financing. The first two categories, i.e. supplier financing and buyer financing, are funded by primary supply chain members. In the other two practices finance is provided by supporting supply chain members. 'Bank financing' is in fact provided by financial service providers (FSPs), either banks or non-bank financial institutions (Chakuu et al., 2019), while LSP financing is when LSPs take the additional role of funders to provide financing solutions including trade credit, loans and inventory finance to primary supply chain members, often the supplying firm (Chen and Cai, 2011; Huang et al., 2019b). LSPs may provide funds by themselves or partner with FSPs to provide integrated logistics and financial

services (Chen and Cai, 2011; Yan and Sun, 2013; Chakuu et al., 2020). These categories are similar to those of Templar et al. (2016) who divide SCF practices according to source of funds as internal and external, where the former comes from supply chain members and the latter from external funders. Among the four categories, bank financing is the most common category explored in these modelling/simulation papers, followed by supplier financing or trade credit. Buyer financing and LSP financing are not very common compared to the other two categories. It is important to note that further details or examples of SCF practices under these categories are simply omitted from this particular literature.

In addition to these four categories, there are some interesting new sources of SCF discussed in some modelling/simulation papers. For example, Wang et al. (2019) compare bank financing with e-business (EB) platform financing, which the authors define as a new form of trade credit. Essentially this involves a platform provider that also provides finance to the buyer or seller. Examples of EB platform financing are provided by well-known Chinese firms such as Alibaba and Jingdong Mall (Wang et al., 2019). The results of Wang et al's study suggest that EB platform financing can yield a bigger order quantity and greater profits than in the absence of financing. Similarly, Gao et al. (2018) introduce online peer to peer (P2P) lending as the only financing option in their study. They find that when the service rate for the finance increases, the wholesale price and order quantity decrease in the case of a capital-constrained buyer, whereas the wholesale price increases but the optimal order quantity decreases for a capital-constrained supplier. Lastly, Yan et al. (2016) add bank financing with a partial credit guarantee as an additional financing option to typical bank financing (i.e. without credit guarantee). Partial credit guarantee means the manufacturer (i.e. supplier) agrees to repay part of the loan to the bank in the case of the retailer's bankruptcy (Yan et al., 2016). The authors conclude that a

partial credit guarantee may yield profit maximisation and channel coordination. This bank financing with a partial credit guarantee is the same concept as distributor finance discussed in the second group of categorisations. Table 3-6 summarises SCF categories by finance provider.

Table 3-6 SCF categorisation by finance provider

Category	Reference
Supplier financing (Trade credit)	Huang et al. (2020) ; Lu and Wu (2020) ; etc.
Buyer financing	Yan et al. (2020) ; Tang et al. (2018); etc.
Bank financing	Raghavan and Mishra (2011); Buzacott and Zhang (2004); etc.
LSP financing.	Chen and Cai (2011); Huang et al. (2019b); etc.
EB platform financing	Wang et al. (2019)
Online P2P lending	Gao et al. (2018)
Bank financing with a partial credit guarantee	Yan et al. (2016)

There are, however, other ways of categorising SCF in the literature, as shown in Table 3-7. One of the most cited categorisations is by Wuttke et al. (2013b) who classify SCF using the time dimension, as pre-shipment (prior to delivery of goods) and post-shipment, while More and Basu (2013) suggest a third category of in-transit in order to be more precise. Wuttke et al. (2013b) categorise both purchase order finance and inventory finance as pre-shipment SCF practices whereas More and Basu (2013) classify the former as a pre-shipment SCF practice but the latter as an in-transit SCF practice. SCF practices involving receivables purchase such as RF, factoring, and invoice discounting are post-shipment SCF.

Table 3-7 Other approaches to SCF Categorisation with example SCF practices

Reference	SCF Categorisations	Examples SCF practices
Wuttke et al. (2013b)	Pre-shipment	Raw material financing; Purchase-order financing
	Post-shipment	Receivables financing; Early-payment discount programs
More and Basu (2013)	Pre-shipment	Raw material financing; Purchase-order financing
	In-Transit	VMI Financing; Inventory Finance
	Post-shipment	Receivables financing; Early-payment discount programs
Gelsomino et al. (2016a)	Finance oriented	Factoring, Invoice discounting, Reverse factoring
	Supply chain oriented	VMI financing; Dynamic discounting
Babich and Kouvelis (2018)	Supplier-led	Trade credit financing, Factoring, and Distributor finance
	Buyer-led	Dynamic discounting and Reverse factoring
Chakuu et al. (2019)	Fixed asset-centric	A pay per production solution; a joint investment decision in logistics assets
	Inventory-centric	Inventory finance
	Buyer-centric/supplier-centric	Reverse factoring/Factoring
Martin and Hofmann (2019)	Pre-shipment and supply chain-internal financing	Inventory finance
	Pre-shipment and supply chain-external financing	Inventory finance, Purchase order finance
	Post-shipment and supply chain-internal financing	Dynamic discounting
	Post-shipment and supply chain-external financing	Reverse factoring

A more recent categorisation is by Martin and Hofmann (2019) who classify SCF using a combination of both time dimension (Wuttke et al., 2013b) and sources (Templar et al., 2016). This leads to the four categories of pre-shipment and supply chain-internal financing, pre-shipment and supply chain-external financing, post-shipment and supply chain-internal financing and post-shipment and supply chain-external financing. Gelsomino et al. (2016a) organise SCF into two perspectives: finance-oriented and supply chain-oriented. The finance-oriented perspective focuses on financial solutions to fund two components of working capital, i.e. account receivables and account payables, as offered by banks (Gelsomino et al., 2016a), including RF, factoring, invoice discounting, etc. The supply chain-oriented perspective emphasises collaborative working capital optimisation between supply chain partners,

especially inventory optimisation such as VMI (vendor managed inventory) (Gelsomino et al., 2016a). This perspective extends the boundaries of SCF to cover not only working capital financing but also fixed asset financing, e.g. Pfohl and Gomm (2009). This is an unusual move, however, as indicated above, and for the purposes of this thesis SCF will be used just in relation to working capital.

Alternatively, taking an initiating party approach, SCF can be divided into "supplier-led" and "buyer-led" practices (Babich and Kouvelis, 2018). Supplier-initiated practices include trade credit financing, factoring, and distributor finance, while buyer-initiated SCF comprises dynamic discounting and RF. Similar to Euro Banking Association (2014), which classifies SCF as inventory-centric, buyer-centric, and supplier-centric, Chakuu et al. (2019) identify three archetypes in their systematic literature review, namely fixed asset-centric, inventory-centric and buyer-centric/supplier-centric. These categories focus on either the initiating party (the buyer or supplier) or type of working capital to be financed (inventory, receivables, or payables).

3.5 Use of methods and theories in the literature

3.5.1 Use of methods

Almost half of the reviewed papers are based on mathematical models or simulations while about a quarter are empirical, mostly a case study approach as shown in Figure 3-4. This is in line with the previous literature reviews (Gelsomino et al., 2016a; Bals, 2019; Jia et al., 2020a) confirming that the current SCF literature is dominated by modelling and simulations. Although these analytical models and simulations are useful in identifying optimal strategies, benefits, and variables influencing SCF adoptions, there is still a need for more empirical evidence

(Gelsomino et al., 2016a) to better understand the social aspects of SCF phenomena that involve dynamic interactions between supply chain members in coordinating the financial flow with the material and information flows (Blackman et al., 2013; Wuttke et al., 2013a).

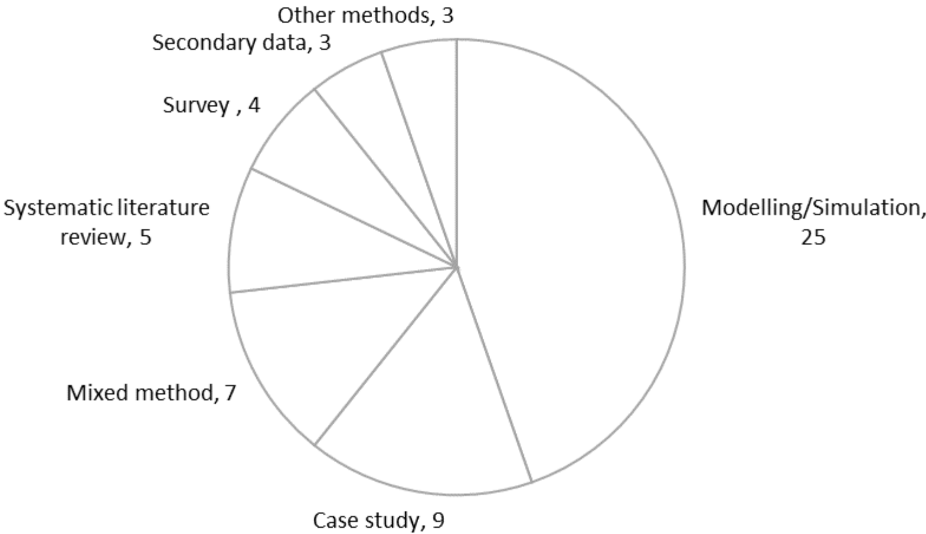

Figure 3-4 Distribution of papers by research method

Papers focusing on inventory optimisation with financially constrained supply chain members adopt modelling or simulation methods, while the rest combine a variety of methods including conceptual, analytical, and empirical investigations. Among the empirical contributions that employ a case study approach to study SCF are those of Wuttke et al. (2013a); Wuttke et al. (2013b); Caniato et al. (2016); Martin and Hofmann (2019). Some authors opt for quantitative methods using surveys (Ali et al., 2018; Wang et al., 2020) or use secondary data (Wuttke et al., 2019), while some papers adopt a mixed approach of modelling and empirical methods (Song et al., 2020). A distinctive approach is the use of focus groups to identify appropriate theories for SCF research by Dekkers et al. (2020). More pertinently, grounded theory or

grounded theory-like methods, as employed in this PhD study, have been previously adopted in several papers, i.e. Wuttke et al. (2013b); Wuttke et al. (2013a); Caniato et al. (2016); and Liebl et al. (2016). These authors appear not to explicitly discuss the use of grounded theory, however, and they have used grounded methods in combination with other methods, typically with case studies. For instance, Caniato et al. (2016) employ grounded methods in their coding by following Strauss and Corbin (1990). Similarly, Liebl et al. (2016) cite grounded theory references, but do not discuss explicitly their use of grounded theory.

Among empirical papers, it is interesting that Martin and Hofmann (2019) successfully use a triad of buyer-supplier-FSP as a construct in their multiple case approach, and empirically manage to study such triads in practice. In a similar vein, Liebl et al. (2016) try to include all the three parties in RF arrangements, even though their cases do not involve true triads in the sense that they do not involve parties to the same transactions. Some scholars instead focus on buyer-supplier dyads, including Wuttke et al. (2013b); Wandfluh et al. (2016); and Wuttke et al. (2019). Nonetheless, the emphasis of these studies is still on the focal firm, typically a large, corporate buying firm. Another relevant aspect when studying SCF adoption is that most studies focus only on successful adoption (Caniato et al., 2016; Martin and Hofmann, 2019). Only Wuttke et al. (2013a) study RF adoption processes that include both adopters and non-adopters. It seems equally important to understand non-adopters when trying to understand how actors make decisions about SCF implementation.

3.5.2 Use of theories

The use of theories in SCF research is still limited, and not many SCF papers employ theoretical frameworks as claimed by Gelsomino et al. (2016a); Dekkers et al. (2020); and Jia et al.

(2020b). Dekkers et al. (2020) conduct a study in which they choose five potential theories for SCF, and then ask a focus group of firms involved in the provision of SCF to assess the appropriateness of these. The group identified four as being suitable for studying SCF, namely transaction cost economics (TCE), agency theory, network theory, and social exchange theory. Three of these four recommended theories have been used in the literature: the exception was social exchange theory. The fifth theory, collaborative network theory, is identified as being less appropriate for SCF study. This is related to the nature of inter-firm collaboration in SCF, and also how applicable game theory might be to SCF schemes, although the authors' discussion is quite hard to follow. In general, SCF papers employ mainly organisational theories although a few financial theories are also used, such as pecking order theory and diversion theory (Jia et al., 2020a).

Of the reviewed papers, 19 were identified as using some kind of general theoretical lens (or 'grand theory'). A total of 17 theories have been used in these 19 papers, as shown in Table 3-8. It is intriguing why such diverse theories have been adopted to study SCF: whether it is because SCF is a new area of research or due to the nature of the subject area itself. The fact that it may indicate that SCF theory is underdeveloped suggests that grounded theory, which is adopted in this PhD research, is an appropriate approach for studying SCF phenomena. While most studies use only one theory, some use two theoretical lenses (Wuttke et al., 2013b; Song et al., 2018; Carnovale et al., 2019). Remarkably, a recent paper by Martin and Hofmann (2019) employs four theories, a contingency approach, social exchange theory, transaction cost economics, and principal agent theory to explain their findings. The drawback of such an approach is that it makes it hard to achieve a parsimonious explanation of processes like SCF adoption.

Table 3-8 The use of theories in the literature

Reference	Agency theory	Bass diffusion model	Business ecosystem	Contingency theory	Enterprise competence theory	Game theory	Information processing theory	Innovation adoption theory	Integrative signalling view	Inventory theory	Network theory	Organisational motivation (Institutional pressures)	Resource-based view	Resource dependence theory	Social exchange theory	System theory	Transaction cost economics
Ali et al. (2018)													√				
Bals (2019)			√														
Carnovale et al. (2019)											√			√			
Gao et al. (2018); Yan et al. (2020)						√											
Huff and Rogers (2015); Van der Vliet et al. (2015)										√							
Iacono et al. (2015); Wuttke et al. (2016);		√															
Jia et al. (2020a)							√										
Lu et al. (2020)					√												
Martin and Hofmann (2019)	√			√											√		√
Randall and Farris (2009)																√	
Song et al. (2018)	√										√						
Song et al. (2020)									√								
Wandfluh et al. (2016)	√																
Wuttke et al. (2013a)								√									
Wuttke et al. (2013b)														√			√
Wuttke et al. (2019)												√					

The theories adopted in two or more papers are agency theory, network theory, resource dependence theory, and TCE. This is consistent with Jia et al. (2020a), who also conclude that resource dependence theory and the agency theory are utilised most in SCF literature. However, the application of such theories appears to have little connection to the findings. For example, TCEs is employed in two papers (Wuttke et al., 2013b; Martin and Hofmann, 2019), but the authors provide limited insight into how theories were operationalised in the design or analysis of their studies. Importantly, the key assumptions such as opportunism and bounded rationality (Williamson, 1975) were only marginally discussed in the papers. The use of agency theory to examine the role of collaboration in the financing context by Wandfluh et al. (2016) is interesting because it stresses the basic asymmetry in supply chain relationships when thinking of members as agents or principals. Wandfluh et al. introduce the idea of an 'agency triad' comprising two principals (purchasing and finance departments) and one agent (the 'supplier'), for studying financing performance. This seems to indicate a clear emphasis on the buyer as focal firm. Furthermore, it is significant that several studies mention information asymmetry: this turned out to be a significant issue in the findings, where different forms of SCF had different implications for dealing with information asymmetry. Nonetheless, information asymmetry has not been used as a theoretical lens in its own right, although it is mentioned by e.g. Devalkar and Krishnan (2019); Lu et al. (2020).

3.6 Main focuses and key findings

Based on the reviewed articles, the SCF literature can be divided into three groups according to the main focus and key findings. The first group puts an emphasis on the optimisation of working capital while the second group only focuses on one component of working capital, the optimisation of inventory. The third group, concerning the application and adoption of SCF practices, primarily examines factors influencing adoption decisions, and in some papers the

outcomes of adoption. Furthermore, scholars also attempt to identify the benefits of SCF for the parties involved, especially the focal firm. Finally, a small number of papers look specifically at other important parties sometimes ignored in the supply chain management literature: the external funders such as banks, service providers, and LSPs. More details of each group are presented in the following three sub-sections.

3.6.1 Working capital optimisation and financial performance

Several scholars take a broad view of SCF, focusing on working capital optimisation. The main argument is the need to take a supply chain perspective instead of a single firm approach, which is recognised as being sub-optimal (Randall and Farris, 2009; Gomm, 2010). These studies concern the three components of working capital or cash-to-cash cycle discussed in Chapter 2, namely Days Payable Outstanding (DPO), Days Sales Outstanding (DSO), and Days Inventory Outstanding (DIO), and link them to the financial performance of supply chains. For example, Randall and Farris (2009) show how firms may increase profit through the reduction of capital costs by adopting a SCM view guided by cash-to-cash cycle and supply chain financing. Likewise, Gomm (2010) proposes a framework for examining SCF and concludes that taking the supply chain perspective can improve the finance cost rate. A three-echelon supply chain model by Gupta and Dutta (2011) comprising a manufacturer, a wholesaler, and a retailer demonstrates the dynamic inflow and outflow of money under capital constraints, including a penalty for late payment and an opportunity to earn interest using available money. The authors propose heuristics for cash management to solve dynamically the problem of when to pay invoices given the uncertainty about when money is coming in.

Using a longitudinal case study of a focal firm, Motorola, Blackman et al. (2013) explore the concept of FSC and find that sharing financial data with suppliers helps generate cost savings

for both parties and improves the payment process as well as reducing risk. Two studies emphasize collaboration and the network features of SCF. First, Wandfluh et al. (2016) highlight the importance of collaboration in SCF relationships, both intra-firm between finance and procurement departments, and inter-firm between the buyer and its suppliers. Using a conceptual model and a survey, they find that collaboration positively affects financing performance in terms of the cost of finance and financial risk. Another interesting study by Carnovale et al. (2019) takes a network perspective to examine the effect of network power and cohesion on financial performance. Using an econometric analysis of a longitudinal panel of automotive supply chain networks from 1985 to 2003, the authors find that network cohesion (density) positively affects efficiency (making better use of financial resources) while network power facilitates earnings performance. Although these groups of papers point out the need for taking the supply chain perspective, they are rather generic and lack discussions on SCF practices that can be used to achieve working capital optimisation. An exception is Huff and Rogers (2015) who analyse Fortune 500 firms worldwide to reveal that changing the firm's payment terms (Day Sales Outstanding, DSO, and Days Payable Outstanding, DPO) leads to small, short-term effects on financial performance, while changing the firm's inventory strategy (Days Inventory Outstanding, DIO) has the largest and long-term impact. Their findings draw attention to the need to reconsider that RF, probably the most-cited SCF practice, which is often used to enhance performance by increasing a buyer's DPO, may only provide a short-term boost because the largest impact comes from improving the DIO. This is consistent with studies by Iacono et al. (2015) and Martin and Hofmann (2019), pointing out a need to apply SCF practices according to working capital goals.

3.6.2 Inventory optimisation with additional financial constraints

About a quarter of the reviewed papers (16 papers) focus on inventory optimisation under an additional constraint in which one of the supply chain members is financially constrained. This constraint has been recently added to inventory models to highlight the importance scholars give to the need for joint operations and finance decisions in supply chain management. These papers concern how the financial constraints of supply chain members, either the supplier, the buyer, or both affect operational decisions regarding inventory size/order quantity and pricing. With regard to SCF, these articles examine the optimal strategies to finance using available SCF options mainly among the four categories discussed earlier, namely supplier financing, buyer financing, bank financing, and LSP financing. Nonetheless, the focus of these papers is mainly on a dyad or a two-echelon supply chain comprising a supplier (manufacturer) and a buyer (retailer). Only a few articles model a three-echelon supply chain consisting of a supplier, a wholesaler, and a retailer, e.g. van Bergen et al. (2019). Importantly, the capital-constrained supply chain member in these papers is typically the buyer (e.g. Gao et al., 2018; Huang et al., 2019b; Wang et al., 2019; Huang et al., 2020, etc), which is opposite to the third group of SCF research in which the upstream supplier is implicitly suggested as the capital constrained party. The few exceptions are van Bergen et al. (2019) and Yan et al. (2020), who model the supplier as the financially constrained party, while Gao et al. (2018) and Raghavan and Mishra (2011) assume both supplier and buyer are financially constrained. More importantly, unlike these modelling papers, the capital-constrained suppliers in the third group often have to provide supplier financing or trade credit to win business. This clearly puts additional financial burdens on the supplier. Furthermore, some authors include other constraints such as tax differences (Lu and Wu, 2020), uncertain demand (Gao et al., 2018), received money constraints (Gupta and Dutta, 2011), etc. Furthermore, a few papers incorporate coordination through supply contracts such as partial guarantee or buyback contracts in their models.

These papers either model only one category of SCF mechanism to determine optimal operations strategies, or a combination of two or more categories and/or operational strategies. Examples of models of one mechanism include Huang et al. (2019b), who demonstrate that order quantity increases under LSP financing, and Yan et al. (2020), who compare two options of buyer financing: loans and investment. Employing a game theoretical approach, the authors show that the investment option is preferred when the retailer is highly loss averse and the supplier is highly financially constrained. Due to the high loss aversion level of the retailer, loans lead to wholesale price reduction while investments result in the reduction of order quantity (Yan et al., 2020). On the other hand, many papers examine a combination of SCF options including trade credit with bank financing (Huang et al., 2020; Lu and Wu, 2020), and trade credit with buyer financing (Chen et al., 2013). Chen and Cai (2011) compare three practices: trade credit, bank financing and LSP financing, and conclude that LSP financing produces higher profits for all parties and the entire supply chain compared to bank financing, and also yields better performance than trade credit. Chen et al. (2013) study behavioural effects of own financing, trade credit, and buyer financing on ordering decisions and, using their model, find order quantities are decreasing over the three options.

Two studies focus on determining the optimal credit limit rather than the optimal financing strategies. Yan and Sun (2013) model optimal decisions of a supplier (price), a retailer (order), and a bank (credit limit). They find that SCF with limited credit may motivate the capital-constrained buyer to order more. Their SCF model involves financing by a partnership: it concerns inventory financing in which an LSP partners with a bank to provide finance to the financially constrained retailer using inventory as collateral. Van Bergen et al (2019) model an interesting buyer financing scheme in which the buyer finances the supplier's inventory in a three-echelon agricultural supply chain consisting of farmers, processors and manufacturers.

They conclude that among three financing strategies of soft tolling (traditional fixed price delivery), hard tolling (buy after harvest) and contract farming (product owned by the buyer), hard tolling would provide higher expected profit for the manufacturer (in this case Heineken) while contract farming would yield the highest expected profit for the supply chain. This is essentially inventory financing provided by the buyer. It is also an unusual example of the use of SCF schemes in the procurement of agricultural rather than manufactured products.

Unlike most articles in this group, a few papers study specific SCF practices rather than broad categories e.g. buyer-financed SCF. Buzacott and Zhang (2004), who are among the first scholars to demonstrate the significance of incorporating finance into production decisions, model asset-based financing in which inventory and receivables are used to secure loans. They reveal that if the interest rates are set too low, then the retailer may order too much resulting in increased default risk (i.e. the bank will not be repaid), while loan limits may discourage retailers from over-ordering. In addition to Buzacott and Zhang (2004), there are three papers focusing on purchase order financing. A paper by Tanrisever et al. (2017) provides a conceptual model of purchase order finance involving three parties ─ an SME supplier, a bank, and the buyer ─ as well as insights into the current practice of purchase order finance from four Dutch financial providers. Reindorp et al. (2018) propose that the retailer can help mitigate information asymmetry between the supplier and the lender, thus extending the supplier's access to finance by committing to a minimum purchase order quantity. Their purchase order financing model also displays the need to adjust the wholesale price or use a combination of price and minimum order commitment under certain conditions. Lastly, Tang et al. (2018) compare buyer financing with purchase order financing by a bank and finds that, under symmetric information, both options yield the same payoff, but the manufacturer has more flexibility in choosing contract terms in buyer financing. For severely financially constrained

suppliers, buyer financing is preferred due to the information advantage to the buyer (Tang et al., 2018): the buyer knows the transactional history of the supplier which a bank would not know. It is important to note that purchase order financing in this paper is between a supplier and a bank whereas Reindorp et al. (2018) model more complex schemes involving commitments as guarantees from the buyer. Table 3-9 summarises the 16 journal articles focusing on inventory optimisation under capital constraints.

Table 3-9 Journal articles focusing on inventory optimisation under financial constraints

Reference	**SCF practice**					**Financially constrained party**		**Decisions on optimality**		
	Supplier financing	*Buyer financing*	*Bank financing*	*LSPF financing*	*Others*	*Supplier*	*Buyer*	*Financing strategy*	*Operation strategy: Order quantity*	*Operation strategy: Pricing*
Huang et al. (2020)	√		√				√			√
Lu and Wu (2020)	√		√					√		
Yan et al. (2020)		√				√		√	√	√
Huang (2019a)				√			√		√	
van Bergen et al. (2019)		√				√		√		
Wang et al. (2019)			√		EB-platform financing		√	√	√	
Gao et al. (2018)					Online P2P lending	√	√		√	√
Reindorp et al. (2018)					Purchase order financing	√				
Tang et al. (2018)		√			Purchase order financing	√		√		
Tanrisever et al. (2017)					Purchase order financing	√				
Yan et al. (2016)			√		Partial credit guarantee		√	√		
Chen et al. (2013)	√	√			Own financing				√	
Yan and Sun (2013)			Inventory financing (LSP partners with a bank)				√	Credit limit	√	√
Chen and Cai (2011)	√		√	√			√			
Raghavan and Mishra (2011)			√			√	√		√	
Buzacott and Zhang (2004)			√		Asset-based financing (inventory, receivable)		√	Credit limit	√	

3.6.3 Application and adoption of SCF practices

Differing from the first two groups, scholars in this group give an emphasis to social aspects of SCF involved in the adoption and application of the specific SCF practices discussed in Chapter 2. Collaborative relationships between parties are an important aspect of these studies: specifically, with supporting supply chain members such as banks and LSPs who are not only seen as key SCF players but also increasingly considered as crucial members of supply chain networks. This contrasts with the second group of papers, where these supporting members are treated merely as sources of financing.

3.6.3.1 Studies focusing on factors influencing SCF adoption

Several studies examine factors influencing the application and adoption of SCF. These factors include objectives or reasons to adopt SCF (Wuttke et al., 2013b; Liebl et al., 2016; Caniato et al., 2019), enablers (Liebl et al., 2016; Martin and Hofmann, 2019), and barriers to adoption (More and Basu, 2013; Liebl et al., 2016). A wide variety of factors have been identified in the literature as presented in Table 3-10. Regarding reasons to adopt SCF, the primary objective is to extend payment terms or Days Payable Outstanding (DPO) (Van der Vliet et al., 2015; Liebl et al., 2016). Some firms aim to reduce risk in supply chains (Caniato et al., 2016; Liebl et al., 2016) while only a few adopt SCF for the purpose of process simplification (Liebl et al., 2016). Key enablers or barriers to adopt SCF include working capital goals (Wuttke et al., 2013b; Iacono et al., 2015; Martin and Hofmann, 2019; Wang et al., 2020), collaboration, both intra-firm and inter-firm (Caniato et al., 2016; Wandfluh et al., 2016), trust (Liebl et al., 2016; Ma et al., 2020), receivables volume (Iacono et al., 2015; Liebl et al., 2016; Wuttke et al., 2016; Martin and Hofmann, 2019), interest spread, i.e. the difference between the two companies' (corporate buyers' and small suppliers') interest rates (Iacono et al., 2015; Liebl et al., 2016),

and having access to other financing options (Lekkakos and Serrano, 2016; Wuttke et al., 2016; Wuttke et al., 2019).

Table 3-10 Factors influencing the application and adoption of SCF

Factors		Factor definition	References
Objectives	Extend payment term (DPO) to improve performance	The focal firms increase supplier payment period in order to improve their cash position	Caniato et al. (2016); Liebl et al. (2016); Van der Vliet et al. (2015)
	Reduce risk	By providing finance to their supplier, the default risk of their supply base is reduced	Caniato et al. (2016); Liebl et al. (2016)
	Process simplification	Use of SCF platform helps eliminate complexity of invoicing process	Liebl et al. (2016)
Enablers/Barriers	Working capital pressure/goals	Need to increase working capital in order to meet current needs or expand operations	Wang et al. (2020); Wuttke et al. (2013b); Iacono et al. (2015); Martin and Hofmann (2019)
	Organisation capabilities (Innovation capability and Market response capability)	The abilities of firms to find new operational processes and adapt to market needs	Lu et al. (2020)
	Lead time (Order fulfilment cycle)	Long lead time requires more working capital	Huang et al. (2019a); Wang et al. (2020)
	Information sharing	Willingness to share sensitive information with supply chain partners	Huang (2019b)
	Collaboration (intra-firm and inter-firm)	Ability and willingness to form collaborative relationships	Caniato et al. (2016); Wandfluh et al. (2016)
	Level of automation of trade process/IT infrastructure	How automated are processes like transmission of delivery notes and invoices, and how extensively are they supported by computing and communications technology?	Caniato et al. (2016); Ali et al. (2018); More and Basu (2013); Martin and Hofmann (2019); Ma et al. (2020)
	Trust/Trustworthiness	The depth and degree of trust that exists in the supply relationship	Liebl et al. (2016); Ma et al. (2020)

Factors		Factor definition	References
	Receivables or purchase volume	How frequently and how large are the purchases, i.e. how important is the supplier in question?	Liebl et al. (2016); Wuttke et al. (2016); Iacono et al. (2015); Martin and Hofmann (2019)
	Dependency	The degree to which the supplier relies on the buyer and vice versa	Liebl et al. (2016); Wuttke et al. (2013b); Martin and Hofmann (2019)
	Interest spread (arbitrage)	The difference between the bank's interest charge incurred by the buyer and that incurred by the supplier	Liebl et al. (2016); Iacono et al. (2015)
	Taxes and regulations	How favourable are relevant laws e.g. laws allowing invoices to act as security?	Liebl et al. (2016)
	Access to finance	What financing options are available to the supplier or SME in particular?	Wuttke et al. (2019); Lekkakos and Serrano (2016); Wuttke et al. (2019)
	Financing cost	The interest charge and fee charged by a financial provider	Wuttke et al. (2019)
	Bargaining power	The power exerted by one party over another (typically, but not necessarily, buyer over supplier) in a trading relationship due to e.g. size, uniqueness of product or service	Wuttke et al. (2019); Wuttke et al. (2016); Caniato et al. (2016)
	Institutional (mimetic and normative) pressures/Exposure	Pressures to conform or exposure to practices (either a drive to copy or adopt normal practice)	Wuttke et al. (2016); Wuttke et al. (2019)
	Payment terms/ DSO period	Terms of payment i.e. period in which payment has to be made against invoices (DSO = Days Sales Outstanding)	Wuttke et al. (2016); Martin and Hofmann (2019); Huang (2019b)
	Knowledge and training	Employees' understanding of and formal training in specifically supply chain finance	More and Basu (2013)
	Willingness of top management to build relationships	Senior managers' prioritisation of development of links with finance providers	Ma et al. (2020)

Factors		Factor definition	References
	Common vision among supply chain members	Suppliers and buyers having the same goal in managing working capital	More and Basu (2013)

Among the manifold factors, the bargaining power of the focal firm appears to be an important factor, especially in relationships involving both a supplier and a finance provider. Due usually to any size difference between the focal firm and the participating firms (SME suppliers or SME buyers), power evidently plays a significant role in facilitating the participation of SME firms in such arrangements (Caniato et al., 2016; Wuttke et al., 2016; Wuttke et al., 2019). But dependency can also lead to power imbalance between trading partners that influences participation decisions (Wuttke et al., 2013b; Liebl et al., 2016; Martin and Hofmann, 2019).

While many studies simply identify factors affecting the adoption, Wuttke et al. (2019) recognise the importance and the need for encouraging suppliers to speed up their participation in RF. They identify two drivers that can accelerate the supplier's adoption speed: efficiency motives and legitimacy motives. Efficiency motives can increase speed of adoption due to 1) the benefit of having access to financing and 2) the reduction of financing costs. Legitimacy motives are based on institutional pressures, which are generally 1) mimetic pressures and 2) normative pressures. The third institutional pressure, coercion, only has an effect when the buyer's stakes are high (Wuttke et al., 2019). This is in line with Wuttke et al. (2016) who find that exposure to successful adoption cases can help facilitate the supplier’s adoption, and so both provide the possibility of copying and creating a standard to which there may be pressure to conform.

Unlike the first two groups, papers in this group mostly examine the specific SCF practices discussed in Chapter 2, with the exception of Lu et al. (2020); Huang et al. (2019); Ali et al.

(2018); More and Basu (2013); and Wuttke et al. (2013b) who focus on SCF in general. Table 3-11 shows SCF practices that have been studied in the literature. RF is by far the most popular SCF practice being studied, either as a single practice or in combination with other SCF practices. While many SCF scholars tend to examine one practice, several studies have revealed the importance of using a combination of SCF practices (Devalkar and Krishnan, 2019; Gelsomino et al., 2019). Devalkar and Krishnan (2019), for instance, find that under high financing cost, there is a need for the buyer to provide RF in addition to trade credit to overcome moral hazard problems (supplier opportunism, e.g. altering product quality) since delayed payment or trade credit alone is insufficient. By providing RF, suppliers get money early and thus have no incentive to save money by reducing the quality of the product. A recent study by Gelsomino et al. (2019) also provides a good reason for studying multiple practices, as they. find on the basis of a model that combining multiple practices SCF (i.e. RF and inventory finance) yields higher performance than a single practice.

Table 3-11 Studies of SCF practices in the literature

Reference	Dynamic discounting	Factoring	Reverse factoring	Inventory finance	Distributor finance	Others
Chakuu et al. (2020)				√		
Lu et al. (2020)	SCF					
Wang et al. (2020)		√	√	√		
Devalkar and Krishnan (2019)			√			Trade credit
Gelsomino et al. (2019)	√		√	√		
Huang et al. (2019)	SCF					
Martin and Hofmann (2019)	√		√	√		
Wuttke et al. (2019)			√			
Wu et al. (2019)			√			Trade credit, Early payment
Ali et al. (2018)	SCF					
Reindorp et al. (2018)						Purchase order finance
Tang et al. (2018)						Purchase order finance

Reference	Dynamic discounting	Factoring	Reverse factoring	Inventory finance	Distributor finance	Others
Tanrisever et al. (2017)						Purchase order finance
Grüter and Wuttke (2017)			√			
Caniato et al. (2016)	√	√	√	√		
Lekkakos and Serrano (2016)		√	√			
Liebl et al. (2016)			√			
Wuttke et al. (2016)			√			
Hofmann and Zumsteg (2015)					√	
Iacono et al. (2015)			√			
Van der Vliet et al. (2015)			√			
More and Basu (2013)	SCF					
Wuttke et al. (2013a)			√			
Wuttke et al. (2013b)	FSC					
Hofmann (2009)				√		
Buzacott and Zhang (2004)						Asset-based financing (inventory, receivable)

It is worth noting that two SCF practices discussed in Chapter 2 are missing from Table 3-11**,** namely invoice discounting and receivable lending. These two practices are only mentioned briefly in some journal papers but are not really studied (see Silvestro and Lustrato (2014)). Purchase order finance, which is found in Tanrisever et al. (2017); Reindorp et al. (2018) and Tang et al. (2018), is discussed in the first stream.

3.6.3.2 Studies focusing on the value of SCF

In addition to factors affecting SCF adoption, several researchers have tried to identify economic rationales for adoption, in particular how SCF affects financing costs as well as its impact on performance. Lekkakos and Serrano (2016) examine the influence of RF on operational decisions and the performance of SME suppliers, and find that RF both helps to unlock more than 10% of the SME's working capital and significantly improves operational

performance. Some scholars propose that using multiple SCF practices concurrently produces better performance than a single practice (Devalkar and Krishnan, 2019; Gelsomino et al., 2019). The results show the benefits for the buyers in providing three SCF practices: around 70% of the total benefits come from inventory finance, 29% from RF while only 1% from dynamic discounting (Gelsomino et al., 2019). This is in line with Huff and Rogers (2015) who find that a change of inventory strategy (Days Inventory Outstanding: DIO) has a larger impact on financial performance than change of payment terms (Days Sales Outstanding: DSO or Days Payable Outstanding: DPO). Table 3-12 summarises the benefits of SCF discussed in the literature.

Table 3-12 Benefits of SCF

Reference	Benefits
Ali et al. (2018); Lu et al. (2020)	SCF positively affect financial performance including improved liquidity and reduced financing costs
Wang et al. (2020)	Factoring and inventory finance reduce supply chain cost (capital cost), but not RF
Devalkar and Krishnan (2019)	Under financial frictions (information asymmetry) which causes high financing cost, RF can be used to address the limitations of trade credit in overcome moral hazard problems (incentives to alter product quality)
Gelsomino et al. (2019)	Multiple scheme SCF (RF and IF) strategy yield higher performance than single with approximately 70% of the total benefits for the buyer are provided by inventory finance and 29% by RF and the remaining 1% from dynamic discounting
Grüter and Wuttke (2017)	Production-enablers (giving flexible financing option for suppliers)
Lekkakos and Serrano (2016)	RF has potential to unlock more than 10% of the SME’s working capital and significantly improves operational performance.
Hofmann and Zumsteg (2015)	Triple win (all the three parties benefit from SCF relationships)
Wuttke et al. (2013b)	Effects on cash flow risk and SC disruption risk

While most studies concern the financial benefits of SCF (i.e. interest rate arbitrage), Grüter and Wuttke (2017) argue for the need to consider the production-enabling aspect of RF. In

other words, the true value of RF is the flexibility of the financing option, which can be either 'manual' or 'automatic'. When using manual or selective discounting, suppliers can decide whether and when to get finance by discounting their invoices. With auto discounting, suppliers always discount their invoice after approval (Iacono et al., 2015). On the same subject, Van der Vliet et al. (2015) assert that auto discounting is only appropriate when the opportunity cost of carrying receivables (the money tied up in receivables) is greater than the discount rate. Otherwise, the supplier should opt for manual or selective discounting (Van der Vliet et al., 2015).

Hofmann and Zumsteg (2015) model what they call an account receivable platform (ARP) programme for export finance between an OECD (Organisation for Economic Co-operation and Development) supplier and non-OECD buyers. This export finance is very similar to distributor finance. They find that the supplier acting as a funder is feasible only when a large number of buyers adopt the practice and have regular transactions. This is in line with Dunn (2011) who has pointed out that the successful implementation of RF depends on the numbers of suppliers participating and regular discount behaviour (auto-discounting).

However, the benefits of SCF may not always be experienced, especially in the case of RF, due to several factors. Lekkakos and Serrano (2016) reveal that the financial benefit of RF can be lessened with payment extension and having access to factoring. An exception is when the interest rate difference between RF and factoring is considerable (Lekkakos and Serrano, 2016). A study by Wang et al. (2020) also shows that factoring and inventory finance reduce supply chain cost (i.e. working capital cost) but RF has no effect on cost reduction. Gelsomino et al. (2019), who study multiple-scheme SCF with the use of models, find that the benefits of SCF depend on working capital requirements (Days Sales Outstanding, DSO, and Days

Inventory Outstanding, DIO), and costs of capital as well as funding limits (set either by bank or the buyer). Wu et al. (2019) maintain that delayed payment or trade credit provides benefits when the supplier has lower capital costs, while early payment and RF provide benefit when the retailer has lower capital costs. Factors that affect the value of SCF are presented in Table 3-13 below.

Table 3-13 Factors influencing the value of SCF

Reference	Factors
Gelsomino et al. (2019)	Working capital requirements (DSO, DIH), costs of capital, and funding limits (by bank or the buyer).
Wu et al. (2019)	Capital costs
Wu et al. (2019)	Under high production cost and demand volatility SCF (trade credit, early payment and RF) are more valuable
Lekkakos and Serrano (2016)	Financial benefit of RF is lessened with payment extension and having access to other factoring. Except the interest rate difference between RF and factoring is considerably large
Van der Vliet et al. (2015)	Payment term extension causes a non-linear financing cost for the supplier.
Hofmann and Zumsteg (2015)	Triple win only occurs in high value goods and frequently traded. Benefits may not be shared equally among parties in which unsurprisingly the focal firm benefit most
Iacono et al. (2015)	Market factors such as competition, interest rates, receivables volumes, and working capital goals

Finally, risk mitigation is also seen as a value of SCF schemes (Lekkakos and Serrano, 2017; Ali et al., 2018). Lekkakos and Serrano (2016) point out that banks have the ability to transfer the financial risk from the supplier to the buyer in RF arrangements. By approving the invoices, the buyer guarantees the payment at the due date, thereby allowing the banks to advance the money based on the buyer's credit rating instead of the supplier's. Ali et al. (2018) also discuss how SCF can protect SMEs due to its nature as a risk mitigation strategy. While default risk is common in SCF arrangements and discussed thoroughly in the finance literature, this study finds that performance risk (in purchase order finance) and risk of opportunism (in RF) also

require attention in order to better understand SCF relationships. The latter, in particular, emerged as being important in the findings, and is discussed in more detail in Chapter 5.

3.6.3.3 Studies focusing on funders

As indicated earlier, SCF studies mainly focus on the focal firm, often the buyer. Particularly in RF, it is implicitly assumed that the buyer is a large corporate firm while the supplier is a small financially constrained firm or SME. Only one paper studies the focal corporate firm as a supplier who provides SCF indirectly through an FSP to its financially constrained buyers (Hofmann and Zumsteg, 2015). In addition to the focal firm, some authors also study SCF from the perspective of external funders, including banks, FSP, service providers, and LSP. Silvestro and Lustrato (2014) are among the first authors who study the role of banks in financial supply chains. They propose a model of physical and financial supply chain integration and identify the enabling role of banks in supply chain integration. They conclude that banks contribute to the four identified enablers of integration: supply chain coordination, supply chain collaboration, information sharing and information visibility. In particular, the use of payment technologies and trade platforms is a key enabler of information sharing and information visibility.

In China, external funders are mainly FSPs other than banks. Song et al. (2018) compare banks and FSPs in providing SCF and find that FSPs can better reduce ex ante and ex post information asymmetry through information acquisition, transactional networks, and process management. FSPs also sometimes act as LSPs and thus have better access to supply chain related information. Two papers focus their studies on determining factors affecting SCF adoptions from the perspective of the FSP. Song et al. (2020) study enablers of information symmetry between SMEs and FSP. SMEs with specific operational capabilities and the essential level of

network embeddedness can overcome information asymmetry by showing partially controlled signals to an FSP (Song et al., 2020). Song et al's study is based on the idea of using networks to signal the quality of suppliers in order to reduce information asymmetry and develop a better chance to get access to finance from an FSP (Song et al., 2020). In this study, FSPs are already formed in a network with suppliers through supply chain arrangements and therefore actors can receive signals through the network. Recently, Ma et al. (2020) study the significance of eight factors in supply chain collaboration and find that the willingness of top management of an FSP to build close relationships, trustworthiness and IT infrastructure with the buyers and suppliers are most important. Surprisingly, they identify that incentive alignment, that is, the mutual benefits gained from the transactions, is the least important factor due to the FSP's inclination to be more risk averse. This thesis also considers banks or FSP as key informants, and the Findings will show the importance of signalling and information asymmetry.

LSPs have increasingly played an important role in SCF relationships. Hofmann (2009) is among the first authors to develop a concept of inventory finance provided by LSPs instead of banks. They propose that profit for LSPs depends mainly on the value and amount of the goods to be financed. Chakuu et al. (2020) extend the literature on inventory finance by identifying conditions for LSPs to provide inventory finance, either on their own or by partnering with banks. Three capacities are needed: organisational capabilities, risk assessment and monitoring. Organisational capabilities appear to be difficult to build and can prevent LSPs from providing inventory finance (Chakuu et al., 2020). In my study, the focus is on banks alone as FSPs, but in the future LSPs could be another actor for investigation in a similar way.

3.7 A summary of the literature

This review of the literature has revealed several limitations of its coverage that help make the case for this thesis:

1. There is underrepresentation of small firms' perspectives and decision making in SCF research (Wuttke et al., 2013a; Bals, 2019).

2. Where there have been studies of small firms, there is clear evidence of hesitancy and sluggishness in the participation of small, non-focal firms in more complex forms of SCF, e.g. reverse factoring (Wuttke et al., 2013a; Wuttke et al., 2019). This can significantly affect the implementation of SCF in terms of set-up cost, onboarding duration, and more importantly success (Dunn, 2011; Hofmann and Zumsteg, 2015). However, little has been done to systematically explain the participation, or lack of it, in SCF.

3. Prior research focuses on outcomes, especially financial performance and financial costs, but mostly neglects the intentions and actions of key actors and lacks an emphasis on the process by which SCF is considered, adopted and used.

4. The literature mainly focuses on the supply side, especially reverse factoring (e.g. Wuttke et al. (2013a); Wuttke et al. (2016); Martin and Hofmann (2019); Wuttke et al. (2019)) and therefore offers insufficient studies on the demand side, e.g. of distributor finance.

5. SCF scholars appear to assume potential participants start from a blank sheet when making the decision to adopt SCF mechanisms, particularly reverse factoring, ignoring existing SCF arrangements that firms may have to modify, and relationships that are affected, when adopting new mechanisms.

6. Lastly, there are several observations made in the literature that seem important in explaining adoption, but which remain to be substantiated. For example, suppliers may not want to participate in order to avoid signalling financial distress to the buyer, but

there is little further discussion or empirical investigation of other signalling aspects of adoption (Wuttke et al., 2019).

3.8 An update of the literature survey

This section is essentially a postscript, and aims to provide an update of the literature following the writing of the first draft of this thesis, by dealing with journal papers that were published late in 2020 and 2021, after performing the last prior search on Business Source Complete on 5th October 2020. A total of 49 papers, of which 19 appeared in 2020, and 30 in 2021, are listed in Table 3-14. Among these papers, seven were published in the recent 2021 International Journal of Operations and Production Management special issue entitled 'The Role of Digital Transformation to Empower Supply Chain Finance' (Chen et al., 2021). This adds to the previous series of special issues mentioned earlier in Section 3.1 composed of nine articles in 2018, eight articles in 2019, and 14 articles in 2020. This shows a continuing interest of supply chain scholars in SCF research.

Table 3-14 Search results

Journal	2020	2021
International Journal of Production Economics	8	3
International Journal of Physical Distribution and Logistics Management	1	1
European Journal of Operational Research	2	-
Journal of Purchasing and Supply Management	-	3
Supply Chain Forum: An International Journal	-	1
Business Process Management Journal	1	-
Industrial Management and Data Systems	3	4
International Journal of Logistics: Research and Applications	1	-
International Journal of Operations and Production Management	-	7
International Journal of Production Research	1	10
Management Science	1	1
Production and Operations Management	1	-
Total	**19**	**30**
	49	

Of these 49 papers, one from 2020 and 15 from 2021 fitted with the inclusion and exclusion criteria used for the original literature search. Table 3-15 summarises the 16 papers that meet the inclusion criteria. Most of the papers focus on one or a few SCF mechanisms, except Guida et al. (2021) who study several SCF practices. Reverse factoring is still the most studied one. The use of methods is both qualitative and quantitative including four papers that used mixed methods. None of these papers use a grounded theory approach. Among these 16 papers, only five use theories (either one or two theories together), and only one uses TCE i.e. de Goeij et al. (2021), which will be discussed in Chapter 6.

Apart from de Goeij et al. (2021), four of the papers are closely relevant to this PhD study because they focus particularly on participation decisions and non-focal firm actors, and are later used in the discussion in Chapter 6, namely Banerjee et al. (2021), Guida et al. (2021), Kouvelis and Xu (2021) and Zhang et al. (2021).

Table 3-15 A summary of the 16 papers

Author(s)	SCF Mechanism	Focus	Method	Theory	Key findings
Elliot et al. (2020)	Inventory finance	Logistics service providers (LSPs)	Case study	Resource-based view	LSPs have sufficient resources for offering inventory finance but they may not see enough value to offer due to inexperience and lack of knowledge
Banerjee et al. (2021)*	Reverse factoring	Supplier	A behavioural choice-based conjoint (CBC) experimental design and content analysis	-	Suppliers tend to reject offers that they perceive to be unfair despite its financial benefits; suppliers tend to trade-off financial benefit for the buyer's trustworthiness. Perceived benefits of digital technologies are increased transparency and reduced variability
de Goeij et al. (2021)*	Reverse factoring	Supplier (SMEs) (including buyer and financial providers)	Case study	Transaction cost economics	Bounded rationality and opportunism help explain why SMEs accept financially unattractive offers or reject the attractive ones. Asset specificity and frequency play insignificant roles in decision making
Guida et al. (2021)*	Reverse factoring, confirming, dynamic discounting, inventory finance, purchase order finance, purchase card	Buyer's perspective	Expert interviews and focus group	-	A proposed model to select buyer-led SCF mechanism based on bargaining power and annual transaction value

Author(s)	SCF Mechanism	Focus	Method	Theory	Key findings
Kouvelis and Xu (2021)*	Factoring and reverse factoring	Buyer and supplier	Analytical model	-	1) Suppliers may not prefer reverse factoring compare to factoring 2) Recourse factoring is preferred when the credit rating of suppliers are relatively high 3) Aggressive payment terms extension lead to indifference between factoring and reverse factoring
Lam and Zhan (2021)	-	SCF service providers	Secondary longitudinal data	-	Providing SCF (SCF initiatives) help mitigate financial risk
Moretto and Caniato (2021)	-	-	A focus group with SCF experts	Contingency theory and resource orchestration theory	Proposed new SCF research directions based on contingency theory and resource orchestration theory, including new SCF mechanisms, actors, collaborations, technologies, regulations, and performance
Nguema et al. (2021)	-	Supply chains	Survey	-	SCF helps mitigate supply chain risk and has a positive effect on operational risk and performance
Nigro et al. (2021)	Bank loan, trade credit, early payment	Buyer (Retailer) and supplier	Analytical model	-	How retailer's effort and trade credit affect the optimal contract e.g. order quantity and discount rate
Ronchini et al. (2021)	Asset-based lending	SCF providers including experts	Case study	Contingency theory	Propositions explain the different typologies of adoption of asset-based lending

Author(s)	SCF Mechanism	Focus	Method	Theory	Key findings
Shou et al. (2021)	Reverse factoring	Buyers	A long-term event study approach	-	Reverse factoring leads to cost efficiency and profitability
Song et al. (2021)	-	Financial service providers	Data mining analysis	-	Financial service providers use implicit big data analytics to identify quality and risks of SMEs. Tailored information using explicit big data analytics supportively helps SMEs to obtain finance
Wang et al. (2021)	Financial supply chain (Joint investment)	Manufacturing partners and financial service providers	Panel data analysis	Resource dependence theory and network organisation theory	Network centrality and power increase financial performance (ROA, ROE and Tobin's Q)
Yan et al. (2021)	Factoring	Buyer (Retailer) and supplier	Analytical model	-	Suppliers with low loss aversion prefer retailer-led factoring while suppliers with high loss aversion prefer factor-led factoring
Yoo et al. (2021)	Bank loan, factoring, reverse factoring	Large final assembler, a first-tier supplier, and a second-tier supplier	Analytical model	-	Contingencies when two sourcing strategies directed sourcing or sequential and SCF options will induce better operational decisions and enhance overall supply chain performance

Author(s)	SCF Mechanism	Focus	Method	Theory	Key findings
Zhang et al. (2021)*	Purchase order finance	Supply chain (logistics) service provider and SME suppliers	Mixed methods	-	Information system integration positively affects POF while social interaction negatively affects POF but positively affects new product launch. POF positively affect new product launch

* These five papers are later discussed in Chapter 6

3.9 Conclusion

This chapter presented a review of the literature including a summary of the previous five literature reviews. The results of this review were discussed according to definitions and categorisation of SCF, the use of methods and theories, main focuses and key findings. The review ended with a summary of several limitations of the current literature. The last section of this chapter provides an update of the literature by discussing journal papers that were published in 2020 and 2021 after the completion of the first draft of this chapter.

In the next chapter, the research methodology adopted for this study will be described, including data collection and analysis. The rigour of grounded theory methodology, which is employed here, will also be discussed.

Chapter 4 Research methodology

4.1 Introduction

The under-developed nature of SCF theory discussed in the literature review justifies the use of grounded theory (GT) as a suitable research methodology. GT is a unique type of qualitative research methodology aiming to construct a theory grounded in collected data instead of choosing an appropriate theory before data collection (Corbin and Strauss, 2015). Originating in the social sciences, GT has been employed in numerous disciplines including business and management (Goulding, 2002), and more specifically supply chain management (Randall and Mello, 2012). GT methodology is recommended for studying emerging supply chain phenomena in order to understand the human side of supply chain management — meanings in human experiences, interactions, and relationships that form organisation strategies and actions (Mello and Flint, 2009; Randall and Mello, 2012). GT is also appropriate to examine phenomena involving complex social behaviour such as buyer-supplier relationships (Kaufmann and Denk, 2011). GT can provide useful tools, such as theoretical sampling and constant comparison to study individuals' experience and perceptions regarding SCF adoption. GT methods are well-equipped with a set of strategies such as theoretical sampling, constant comparative method, and memo writing for conducting rigorous research (Charmaz and Belgrave, 2007). Thus GT methods are defined as "a logically consistent set of data collection and analytic procedures aimed to develop theory" (Charmaz and Belgrave, 2007, p.27).

This chapter presents the research methodology employed for this study and how it has guided data collection, analysis, and development of substantive theory. The remainder of this chapter consists of a further five sections as outlined in Figure 4-1.The chapter starts with the research design comprising research aim and questions, research philosophy (essentially pragmatism),

and research approach (abduction). The subsequent section describes data collection in accordance with GT methods. This is followed by data analysis, the coding process, memoing, document analysis, and the use of computer-assisted qualitative data analysis software (CAQDAS). Next, rigour in grounded theory research is discussed. The last section summarises the chapter and provides an overview of the next chapter.

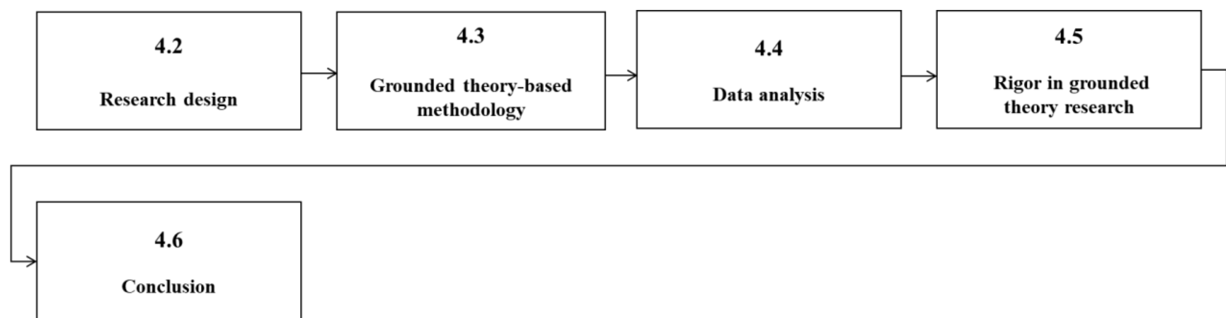

Figure 4-1 Flow of Chapter 4

In the remainder of this chapter, the people being interviewed will be termed 'informants', rather than 'participants'. This is to avoid confusion between participating in interviews and participating in supply chain finance arrangements (where it is the firms that are termed 'participants').

4.2 Research design

My research topic evolved around individuals' (primarily SME owner-managers') experience and perceptions of risks and benefits of participating in financial relationships with their supply chain partners and financiers, as well as their decisions regarding SCF participation. I studied the informants' subjective beliefs, understandings, and attitudes towards other supply chain actors and their engagement in finance by analysing their spoken words in interviews, recorded with their permission. Owing to the inconsistency in terms and definitions of SCF, the study

started with an exploratory investigation after a relatively limited pre-fieldwork literature review. The initial data collection in the UK (Phase 1), thus, not only addressed the initial research question but also explored both subjective (relationship-related) and objective (cost-related) aspects of SCF from the informants' point of view. In keeping with GT methods, I conducted initial data analysis from field notes to guide further data collection (i.e. theoretical sampling). The emergent findings from the initial data analysis and memo writing pointed to the importance of the distinction between types of SCF in which suppliers received finance from their 'own' banks and those in which they received finance from their supply chain partners' banks, and the significance of two different contexts: emerging and non-emerging markets for SCF adoption. A second phase of fieldwork was therefore conducted in Thailand, leading to additional emphasis on banking relationships. I returned to gather more data in the UK with an additional focus on these banking relationships in Phase 3, the last phase. Primary coding of all transcripts was conducted alongside the post-fieldwork literature review and this led to secondary coding. Figure 4-2 depicts the different stages of this study.

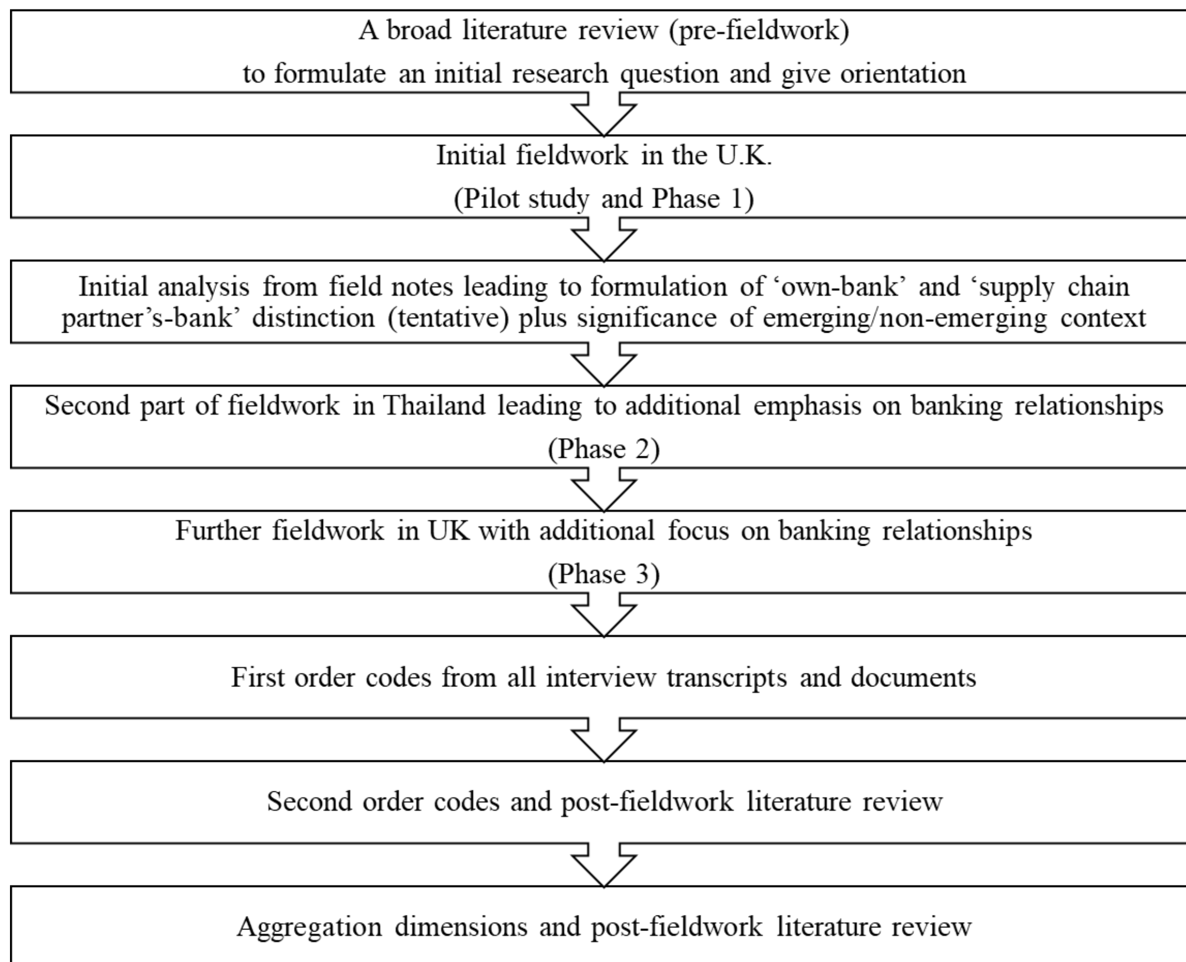

Figure 4-2 Stages in conducting the PhD study

4.2.1 Research aim and questions

The aim of the study has been to understand supply chain finance (SCF) adoption from the small, non-focal firm perspective. These firms are typically suppliers of the large focal firm in supply chain networks. A broad literature review (pre-fieldwork) identified a largely unexplored issue concerned with why suppliers are reluctant to adopt reverse factoring (RF). To gain a better understanding of the state-of-the-art in SCF adoption and to address this research gap in the literature, the initial research question was generalised slightly to take this concern on board:

What impedes the adoption of reverse factoring (RF) from the supplier's perspective?

Generally, some grounded theorists (Glaser and Strauss, 1967) would recommend more general research questions than this, but the initial reading of the literature suggested that the lack of adoption of RF was the central problem. In keeping with the theoretical sampling principle of GT, data collected from the initial fieldwork (Phase 1, as indicated in Figure 4-2) were analysed to find emergent themes that would guide further data collection. As indicated above, these emergent themes directed the subsequent empirical investigation toward the interplay between two types of SCF relationship that emerged from the initial analysis: those in which an SME firm (usually, but not always, a supplier) received finance from its banks, and those in which it received finance from someone else's (its supply chain customer's) bank. As explained in chapter 5, these two types were termed dyadic SCF (DSCF) and triadic SCF (TSCF). TSCF included RF, but importantly also included distributor financing. This led to a further generalisation and modification of the research question, so that it was not specifically about RF:

How do SMEs and banks construct their understandings of, and make decisions about, the adoption of supply chain finance (SCF)?

This emergent research question also reflects the fact that the concern is specifically with SME members of supply chains, who can be either suppliers or distributors of a focal firm, and with banks as external providers of finance.

4.2.2 Research philosophy: Pragmatism

The underlying premise of classical GT is that the researcher's task is to find or discover knowledge (Glaser and Strauss, 1967; Glaser, 1992), a principle that grounded theorists suggest points to a positivist GT (Locke, 1996; Charmaz, 2006; Clarke, 2007; Birks and Mills, 2015; Bryant, 2017; Bryant and Charmaz, 2019). However, the way I used GT in my study was similar to the constructivist version of GT suggested by Charmaz (2006), because the influences I looked at concerned the way that organisation members understand or perceive the reality of SCF socially, through their interactions with others on the subject of SCF, and with the interviewer. I also consider that my work fits with a pragmatic variant of GT discussed in the later work of Charmaz and her colleague (Bryant and Charmaz, 2007; 2019). In spite of her constructivist approach, Charmaz has overtly acknowledged the connection of pragmatism and GT (Bryant and Charmaz, 2007; 2019).

Pragmatism is a philosophical position that is located between the assumptions of the two extremes of positivism and constructionism (Saunders et al., 2016). While positivism posits that reality exists externally and should be measured using objective methods without interventions from the researcher, constructivists believe reality is subjective and socially constructed through the meaning given by social actors (Crotty, 1998; Saunders et al., 2016). Pragmatists view knowledge or concepts as tools, and believe their value lies in their usefulness instead of some universal validity (Morgan, 2014). Pragmatism postulates that concepts are only relevant where they can support action (Kelemen and Rumens, 2008). This research study involves SCF both in developed and emerging worlds where the actors are using SCF, its ideas and its procedures, to 'get into action' (Weick, 2000) – in this context to get into the action of managing the working capital gap in a supply chain.

I have chosen to adopt the pragmatist approach because I believe that it represents appropriate ontological and epistemological stances for my PhD thesis for three reasons. First, pragmatism fits with my ontological stance that lies between objectivism and subjectivism. The focus of my study is not on the purely objective or subjective since SCF involves both objective elements like financial costs and subjective ones like the value of collaborative relationships, as well as elements with both properties such as 'risk'. While risk is measured objectively within the context of SCF, e.g. by banks algorithmically calculating default risk, risk is also subjectively perceived in the same context, e.g. SME owners' concern about disclosure risk. For example, in the findings described in Chapter 5, I make the observation that SME owner-managers did not have the time or expertise to calculate the exact costs of adopting SCF practices. Rather, they relied on their subjective perceptions of adoption in order to build or maintain a relationship with the focal firm. Pragmatists challenge the dualisms of subjectivism (constructivism) and of objectivism (positivism), contending that "the usual forced dichotomy between subjective and objective is an equally artificial summary of the relationship between the researcher and the research process" (Morgan (2007, p. 71).

Second, pragmatism is consistent with the idea that both the meaning and relevance of SCF as a concept is likely to keep changing and evolving, contingent on the experience of actors dealing with other supply chain members, such as FSPs, including their developing awareness of laws and regulation concerning finance. For example, the highly publicised collapse of Carillion discussed in Chapter 2 probably negatively influenced SME perceptions of SCF in general and RF in particular, especially in the construction sector. Banks probably also became more vigilant and more meticulous in determining SCF arrangements. In Thailand, as explained in Chapter 5, schemes like RF became part of SCF practice only when there was a change in the law. This notion of a changing and evolving SCF is in line with pragmatists'

view of reality as constantly in the making, neither static nor finalised (Kelemen and Rumens, 2008).

Third, as stated earlier, pragmatism claims that concepts are only relevant where they support action ─ i.e. they must be useful (Kelemen and Rumens, 2008). Usefulness, a key concern of pragmatism, is defined epistemologically as trustworthy, well founded, reliable, and relevant knowledge, while defined normatively as knowledge that can help advance research and improve situations (Wicks and Freeman, 1998). The focus of this study is on what works, or does not work regarding the adoption of SCF, including how and why it works, or does not work. When I analysed SCF principles and practices, I was primarily concerned with how they enabled actors to act. For example, RF is interpreted by some as a way of conducting interest rate arbitrage made possible by two supply chain actors having a collaborative relationship. But it is interpreted by others as a way of establishing or maintaining a supply chain relationship; and by others as a way for a focal firm to further delay payments to suppliers. As a pragmatist, my own theorising is primarily guided by its usefulness in opening up interesting lines of questioning and in organising a whole set of observations and perceptions of SCF.

4.2.3 Research approach: Abduction

My approach to this research study was abductive in the way I carried out data analysis. Abduction has been explained as a moving back and forth between deductive and inductive stages (Timmermans and Tavory, 2012; Reichertz, 2019). I attentively read the interview transcripts to identify any ‘surprising findings’ or ‘somewhat anticipated findings’ in view of prior research or existing theoretical lenses (Timmermans and Tavory, 2012; Tavory and Timmermans, 2019). I also moved back and forth between identifying codes/categories from the collected data (i.e. induction) and connecting the codes/categories with existing theories

and literature (i.e. deduction). To explain my abductive approach, for example, when analysing interview transcripts from Phase 1, two types of SCF relationships emerged from the data: (1) SCF practices that involved two parties, such as invoice discounting and inventory finance; and (2) SCF practices that involved three parties as a smallest possible unit, such as RF and distributor finance. I coded these SCF practices under Dyadic SCF and Triadic SCF categories, respectively. These two categories did not simply emerge from the empirical data, but from an appreciation of the similarity to service triads as already explained in the supply chain management literature (Li and Choi, 2009; Van der Valk and van Iwaarden, 2011; Wynstra et al., 2015).

Working closely and carefully with the collected data helped me identify emergent patterns which then required explanation. The aim of adopting an abductive approach to GT is to come up with explanations for these patterns to modify existing theories or construct novel theories (Timmermans and Tavory, 2012; Tavory and Timmermans, 2019). Theory construction is the result of an iterative process of coding and memo writing, and connecting to existing theories (Timmermans and Tavory, 2012). I did not try to impose any theoretical frameworks from the start but instead I constantly referred to or compared the emergent patterns with the existing theories and relevant literature, by asking how the observations (i.e. codes/categories) relate to the existing theories. As will be described in Chapter 6, this particularly involved identifying correspondences with transaction cost economics (TCE). This theoretical background came not only from the SCF literature but other, related literature, including that of supply chain management, finance, and entrepreneurship. This is consistent with a concept of ‘theoretical sensitivity’ (Glaser, 1978) which is defined as “the ability to generate concepts from data and to relate them according to normal models of theory in general, and theory development in

sociology in particular,..” (Glaser and Holton, 2004, p.11). Theoretical sensitivity can be enhanced by reading extensively in other disciplines (Glaser, 1978), as just indicated.

4.3 Grounded theory-based methodology

Concurrent data collection and analysis is key to GT methodology. During the fieldwork period lasting 16 months from December 2018 to March 2020, I simultaneously analysed data from field notes and wrote a series of memos which helped direct further data collection consistent with theoretical sampling. Several significant changes were made during the three phases of data collection led by concepts that emerged from analysing data collected during the earlier stages. This section describes detailed information about how the empirical investigation was designed and conducted in accordance with key procedures of GT methodology, including theoretical sampling, constant comparison, theoretical saturation, and memoing.

The following sub-sections begin with a discussion regarding the use of the literature, followed by an explanation of the familiarisation period. Then, data gathering including theoretical sampling is explained. The subsequent sub-sections describe interview guides and procedures, followed by profiles of research informants. Finally, the analytical process, including coding, constant comparison, theoretical saturation, memoing, and document analysis are elucidated.

4.3.1 The treatment of the literature and familiarisation period

4.3.1.1 Pre-fieldwork and post-fieldwork literature review

Due to ongoing debates regarding the review of the literature in GT approaches, it is important for researchers adopting GT methodology to discuss the use of the literature in their research. Classic GT recommends avoiding conducting an extensive review of the literature before data collection in order to remain open to the emergence of theory without any preconceived ideas

(Glaser, 1978; Holton, 2007). However, this may be impractical owing to institutional requirements (Timonen et al., 2018). I followed Charmaz's (2006) advice to carry out a very broad review of the literature prior to collecting data while undertaking an extensive review once the data collection had been completed, for two reasons. First, the pre-fieldwork literature review was necessary, especially for PhD theses because of the need to: 1) fulfil institutional requirements to conduct a literature review for the first-year panel meeting, and the need to apply for ethics approval before conducting fieldwork; 2) identify whether similar research had been conducted, and to formulate the initial research question and interview guides (Charmaz, 2006; Corbin and Strauss, 2015). Second, the extensive literature review undertaken post-fieldwork helped enhance my theoretical sensitivity (Glaser, 1978) and could be used as an additional data source where the extant literature was integrated into the emergent theory (Glaser and Holton, 2004). Furthermore, existing theoretical frameworks and knowledge can be useful and relevant for explaining and discussing the contribution of the emergent theory (Birks et al., 2009). In Chapter 6, I try to show how the main findings are connected to the literature reviewed in this post-fieldwork phase. Also, an attempt was made to identify the most appropriate existing theoretical lens – which turned out to be transaction cost economics (as justified in Chapter 6) – and systematically assess which findings the lens could explain and which it could not.

4.3.1.2 Familiarisation

Prior to starting and during the fieldwork, I familiarised myself with the research setting by 1) having informal conversations with potential research informants, 2) attending relevant meetings, and perhaps most importantly 3) conducting interviews with three academic experts in the field. Familiarisation is considered essential in effectively accessing the voice of the research informants and to enhance the quality of the collected data, not only in ethnographic

research, but also in other research strategies (Barley and Bath, 2014). It is significant to note that data from the informal conversations were not included in the analysis and were collected before applying for ethics approval. Likewise, information gained from attending the meetings were excluded because informed consent was not sought, while the academic expert interviews were used to provide background in Chapter 2 only.

To start with, I had informal conversations in May 2018 with one UK bank manager and one entrepreneur who was also an expert in the field of accounting and finance, before commencing the pilot study. Apart from familiarising myself with the research context, the informal conversations had two additional objectives. First, it was an opportunity to familiarise myself with specialised language (Barley and Bath, 2014), i.e. the SCF terms and synonyms used and understood by potential research informants. This was necessary due to overlapping definitions and a lack of consensus around the terms and scope of SCF identified during the pre-fieldwork literature review. Second, it was an opportunity to gain insights into state-of-the-art SCF practices. For example, both the bank manager and the expert pointed out that SCF covered more than just RF (for example invoice discounting, traditional factoring and even overdrafts), resulting in the inclusion of questions regarding a broader spectrum of SCF practices. These informal conversations also helped guide study design and informant recruitment in which bank managers and experts were included in addition to SMEs for the purpose of triangulation and broadening of perspective.

Additionally, I attended two meetings involving SMEs and the use of finance, both at the local and central levels (see Table 4-1). During the meetings, I had opportunities to take notes, ask questions, and discuss with participants who were active in the field of finance or worked with UK SMEs. The first meeting in Manchester was a presentation about alternative finance

arrangements and a panel discussion on the best ways for businesses to access finance in the North West. The second meeting in London discussed growth and finance for SMEs. Attending these two meetings allowed me to develop a better understanding of SME financing and how the availability of financing options may affect SMEs.

Table 4-1 SME meetings I attended

Date	Meeting	Venue	Key participants
11th April 2019	Access to Alternative Finance for The North West	Manchester	Banks, Non-Banks, Associations, Government Agencies
6th June 2019	Scaleup Institute Meeting	London	Large Corporates, Banks, Associations, Government Agencies, Experts

The academic experts who were consulted included two supply chain finance researchers and one finance specialist. They were interviewed for about one hour each, and provided background on issues such as: 1) differences between financial markets in developed and developing economies; 2) differences between cultures particularly in terms of sensitivities to revealing financial circumstances; 3) terminology and language around the subject area, for example the common confusion of RF with SCF generally; 4) the existence of interest groups like the Supply Chain Finance Forum and Community, and the guidance they provide for practitioners. As described later in Chapter 5, awareness is an important category: while interest groups do exist to increase awareness and provide guidance on SCF, it does not always reach SMEs in particular.

4.3.2 Data collection

The study employed qualitative, in-depth interviews as a primary data collection method to draw out people's thinking, perceptions and interpretations ─ i.e. their subjective experiences

and perceptions, rather than recorded financial costs in relation to the adoption of SCF practices. According to Mintzberg (1979, p.586), qualitative inquiry is more appropriate for organisational studies:

> "Measuring in real organizational terms means first of all getting out into the field, into real organizations. Questionnaires often won't do. Nor will laboratory simulations,…".

It is also suggested that a qualitative study draws upon multiple (at least two) sources of evidence for the purpose of triangulation (Saunders et al., 2016). It is argued that triangulation is not simply a way to validate findings, but it is also the way to gain more comprehensive knowledge and understanding of the phenomenon under study (Flick, 2018). The notion of triangulation is similar in grounded theory in the recommendation to use 'slices of data' — i.e. the use of different views to understand and develop the conceptual categories (Glaser and Strauss, 1967). In this study, SME owner-managers and bank managers were the main focus, and interviews from experts complemented the SMEs' and banks' interviews for a better understanding of SCF adoption in SME contexts, whilst also serving as 'a triangulation of perspectives' through the use of multiple informants (Flick, 1992; Gilchrist, 1992; Flick, 2018). While bank managers clearly played a key role in providing SCF and managing financial relationships with SMEs, experts (a representative of an international financial body, a practitioner in SCF, two UK local government procurement officers, and an officer in a UK SME association), were also included as key informants because they had specialist knowledge, were willing to share it, and were able to make observations that the researcher could not make (Gilchrist, 1992).

4.3.3 Sampling

There were two types of sampling: purposive sampling (essentially sampling by the researcher's judgment of who or what is appropriate to the aim of the study) and theoretical sampling (sampling guided by previous data and the concepts that are emerging from it). Theoretical sampling is central to this study. Nonetheless, before theoretical sampling can be applied, initial data needs to be collected and analysed. Thus, at the outset of data collection, purposive sampling was adopted, aiming to gain the best possible access to potential informants. Glaser (1978, p. 45) suggests that researchers start the fieldwork by "go[ing] to the groups which they believe will maximize the possibilities of obtaining data and leads for more data on their question". Accordingly, the key informants for this study, especially SME owner-managers and bank managers, were recruited through university staff for three reasons. First, the university staff who had worked with SME owner-managers were the most likely people to connect me with potential informants. Second, because of the need to avoid bias due to power relations between large and small firms, SME informants could not be recruited through a focal firm: there was a risk that an SME recommended by one of their customers would not feel able to speak openly. However, this posed a major challenge in getting access to SME owner-managers who were busy dealing with both daily operations and management. Third, owing to the sensitivity and confidentiality of the research topic, concerning finance, gaining the trust of the research informants through personal recommendations was deemed essential. I obtained the assistance of three university staff members to help introduce me to potential interview informants. Through introduction by the university staff, SME owner-managers as well as bank managers were inclined to trust and willingly discuss sensitive matters such as working capital financing with me. I also asked informants to introduce me to their business network where possible, through which I gained access to an additional four informants.

Once initial data were collected and analysed, purposive sampling ceased, and theoretical sampling adopted instead. The purposive sampling was defined by the need mainly to get started, and therefore to talk with both SMEs and banks in order to find an initial direction of investigation. This essentially involved the first three interviews together with supporting document analysis. Although this is a small number there is no general recommendation about purposive sample sizes, and it was sufficient to confirm the essential direction of interviewing further SMEs and banks. Theoretical sampling, one of the key procedures of grounded theory methods, is defined by Glaser and Strauss (1967, p. 45) as:

> "the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges".

The aim of theoretical sampling is to clarify conceptual categories that emerge from the analysis being conducted concurrently with data collection (Corbin and Strauss, 2008b; Breckenridge and Jones, 2009). For example, initial data analysis derived two categories of 'Dyadic SCF (DSCF)' and 'Triadic SCF (TSCF)' which directed further sampling to focus on these two categories. Theoretical sampling also tells the researcher 'where next' to collect data regarding informants and locations (Glaser, 1978). The move to collect data in Thailand in Phase 2 was led by theoretical sampling in the sense that:1) two UK informants mentioned that RF was more favoured in emerging economies than in developed nations; and 2) one of the triadic SCF practices, receivable finance or distributor finance, that was not offered in the UK was being offered in Thailand. The focus of phase 2, thus, was to theoretically sample and saturate the TSCF category with sub-categories. The sampling criteria, as in grounded theory generally, evolved as the analysis went on. Theoretical saturation is achieved when no additional data can be used to develop properties or dimensions of a category (Glaser and

Strauss, 1967). This means that the UK sampling strategy was initially purposive and then theoretical, whereas the Thai sampling strategy was purely theoretical, following the analysis of the UK sample. The resulting sample, as demonstrated in the next section, showed a greater proportion of banks in the Thai sample, and a more equal concern with both downstream and upstream SCF in contrast to the UK sample.

4.3.4 Informants

To understand the perception and experience of financing decisions of SMEs, I primarily drew on data collected from three qualitative sources: 1) in-depth interviews with SME owner-managers who made decisions regarding the finance and financing options of their firms, and (2) in-depth interviews with bank managers who worked with SMEs or were involved in offering SCF, and (3) interviews with subject experts who worked with SMEs or worked in the field of finance. SMEs typically are smaller firms where the division of labour is not the same as in larger firms. Owners play a key role in managing their firms' operations including working capital. Interviews with bank managers and experts complemented the SMEs' interviews for a better understanding of SCF in an SME context and served as a triangulation of perspectives (Flick, 2018). This triangulation comes from adding a general perspective across multiple instances of SCF or multiple SMEs, adding a buyer's perspective, and adding the perspective of an individual involved in introducing legislation enabling SCF. Please see also Table 4-4 below for specific details. Initially, the data collection was aimed at understanding SCF in the UK (although one of the UK informants was in fact a Swiss firm, as indicated in Table 4-2). Nonetheless, guided by initial data analysis, I also collected data in Thailand where SCF had just started to be offered by banks. Unlike in the UK, bank managers were the largest data source, followed by SME suppliers and dealers, and then experts. The two contexts provided insights into two distinct institutional circumstances in terms of regulations

and financial markets, as well as two different stages of SCF where the UK SCF has been available for more than a decade, compared to its recent emergence in Thailand. Unlike in most of the prior literature, anchor firms were excluded from the study. This is because the research question concerned the non-anchor firms' perspectives specifically, given that these perspectives are much less covered in the literature, as discussed in Chapter 3.

A total of 56 informants from 46 organisations consisted of 29 SME owner-managers from 27 small firms, 22 bank managers from 14 banks, and five subject experts. The interviews were conducted in a multistage process described earlier, comprising the pilot study (one SME, one bank), Phase 1 (seven SMEs, two banks, and one subject expert), Phase 2 (eight SMEs, nine banks), and Phase 3 (eleven SMEs, two banks, and four subject experts). In addition to interview data, I also draw on analyses of documents, both printed and electronic versions, in order to fill out or clarify the content of the interviews.

The first group of research informants were SME owner-managers. Unlike the corporates or large enterprises that are commonly used as a unit of analysis in supply chain management research, there has not been an emphasis on SMEs in supply chain management research, apart from their role as a supplier of a focal firm. However, with the recent increase in attention on SCF a spotlight has been placed on SMEs as key players in the successful implementation of SCF programmes (Dunn, 2011; Hofmann and Zumsteg, 2015). SMEs are often quite distinct as actors, due to constrained resources and the dominant role of the owner/senior managers in decision making, particularly in relation to finance (Ogarcă, 2010; Rasheed and Siddiqui, 2019). Adhering to confidentiality agreements, all names of individuals, organisations, and any identifiable data such as job titles have been modified. An informant number was allocated to anonymise each person's identity where there was more than one informant in a firm. The

businesses represented in the sample ranged from small proprietorships to medium-sized firms, and represented a wide range of industries including manufacturing, construction, and professional services. They were all established SMEs, being in business for 10 years or more (10-40 years), except for ES6, a bottled drinks micro-manufacturer (founded for about 6 years). Table 4-2 provides details of the SME informants. The column showing ‘size’ is based on number of employees, but it is important to say that certain firms were nonetheless quite sophisticated financially, and had substantial turnover, even though they had small numbers of staff. ‘Micro’ means less than 10 employees, ‘small’ means less than 50 and ‘medium’ means less than 250 (European Commission, 2015). UK SMEs are labelled ‘ESn’ and Thai SMEs ‘TSn’.

Table 4-2 Profiles of SME informants

Phase	**Organisation label**	**Informant label**	**Role**	**Size**	**Nature of business**
Pilot	ES1	ES1	Managing Director	Micro	Educational service
One	ES2	ES2	Director	Small	Manufacturer (Food), (Swiss)
	ES3	ES3	Founder and Finance Director	Small	Manufacturer (Building materials)
	ES4	ES4	Operations Director	Medium	Manufacturer (Navigation products)
	ES5 (Joint interview)	*ES5-1	Chairman	Small	Recruitment service
		ES5-2	Operations Director		
	ES5	ES5-3	Finance Manager		
	ES6	ES6	Founder	Micro	Manufacturer (Bottled drinks)
	ES7	ES7	Director	Small	Manufacturer (Food)
	ES8	ES8	Managing Director	Small	Manufacturer (Sports goods)

Phase	Organisation label	Informant label	Role	Size	Nature of business
Two	TS1	TS1	Managing Director	Small	Wholesale (Medical supplies)
	TS2	TS2	Founder	Small	Wholesale (General goods)
	TS3	TS3	Director	Medium	Manufacturer (Personal care products)
	TS4	TS4	Director	Small	Service (Petrol station)
	TS5	TS5	Director	Small	Construction
	TS6	TS6	Founder	Small	Services (Printing house)
	TS7	TS7	Founder	Small	Wholesale (General goods)
	TS8	TS8	Managing Director	Medium	Wholesale (Construction supplies)
Three	ES9	ES9	Finance Director	Medium	Manufacturer (Personal care products)
	ES10	ES10	Managing Director	Small	Financial service
	ES11	ES11	CEO	Small	Wholesale (Construction supplies)
	ES12	ES12	CEO	Small	Manufacturer (Other paper)
	ES13	ES13	Director	Micro	Social enterprise (Community support activities)
	ES14	ES14	Managing Director	Small	Services (Professional)
	ES15	ES15	CEO	Small	Services (Hospitality)
	ES16	ES16	Director	Small	Services (Professional)
	ES17	ES17	Managing Director	Micro	Services (IT)
	ES18	ES18	Director	Small	Construction consultancy
	ES19	ES19	Senior Partner	Small	Construction consultancy

* Interviewed twice

Most informants were proprietors, partners, or executives of the firm. There was one operations director and one finance director who were interviewed instead of the owner-managers due to

their involvement in SCF adoption. A total of 29 informants from 27 SME firms were interviewed. One firm, a small but technically knowledgeable outsourcing and recruitment service SME (ES5), which adopted RF involuntarily and later stopped using it, was interviewed three times. The first was a joint interview between an executive and his operations director in Phase 1, followed by a follow-up interview with the executive for further information and clarification in Phase 3. The third interview was conducted with the company's finance manager who was involved with different SCF adoptions and provided more detail, including the demonstration of how they used the SCF platform to submit invoices and withdraw money. The participating SMEs covered both adopters and non-adopters of TSCF practices, which provided greater insights into SCF adoption. Non-adopters comprised both SME firms who declined offers and SMEs who were not offered to join SCF schemes by a focal firm. While the former revealed the reasons for and the factors that contributed to non-adoption, the latter provided a broader context and factors general to their thinking about SCF . Although only two SMEs adopted RF, there was some compensation by studying one of the two adopter cases in-depth: ES5 as indicated above. Nonetheless, this is an important limitation on how far the findings can be generalised – an issue that is further examined in the Conclusion.

The second group of informants were bank managers (Table 4-3). Due to the sensitivity of the information, their specific role or job title has not been indicated in the table, but titles included Relationship Director, Trade Director and Corporate Banking Manager. In the remainder of this thesis, these informants are referred to as 'bank manager'. There were 22 informants from 14 banks: five UK banks and nine Thai banks. Most informants were managers in either an SME division or Corporate division; however, three interviews were conducted with banks that were not segmented into divisions (EB2, EB4, EB5, TB5). While UK banks did not provide distributor finance, five of the Thai banks offered it. UK banks are labelled 'EBn' and Thai

banks 'TBn'. The study concentrated on banks as finance providers, ignoring non-bank institutions such as specialised factors and LSPs providing SCF, and ignoring technology or platform providers. This is because of constraints on time and available personal contacts, and although firms like LSPs and platform providers play an increasing role in SCF, banks are still the key players.

Table 4-3 Profiles of bank informants

<table>
<tr><th>Phase</th><th>Organisation</th><th>Informant</th><th>Division of bank</th></tr>
<tr><td rowspan="2">Pilot</td><td rowspan="2">EB1
(Joint interview)</td><td>EB1-1</td><td>SME</td></tr>
<tr><td>EB1-2</td><td>Corporate</td></tr>
<tr><td rowspan="2">One</td><td>EB2</td><td>EB2</td><td>No Division</td></tr>
<tr><td>EB3</td><td>EB3</td><td>Corporate</td></tr>
<tr><td rowspan="14">Two</td><td rowspan="2">TB1</td><td>*TB1-1</td><td>Corporate</td></tr>
<tr><td>TB1-2</td><td>SME</td></tr>
<tr><td>TB2</td><td>TB2</td><td>Corporate</td></tr>
<tr><td rowspan="2">TB3
(Joint interview)</td><td>TB3-1</td><td rowspan="2">Corporate</td></tr>
<tr><td>TB3-2</td></tr>
<tr><td rowspan="2">TB4</td><td>TB4-1</td><td rowspan="2">SME</td></tr>
<tr><td>TB4-2</td></tr>
<tr><td rowspan="2">TB5
(Joint interview)</td><td>TB5-1</td><td rowspan="2">No Division</td></tr>
<tr><td>TB5-2</td></tr>
<tr><td rowspan="2">TB6
(Joint interview)</td><td>TB6-1</td><td rowspan="2">SME</td></tr>
<tr><td>TB6-2</td></tr>
<tr><td>TB6</td><td>TB6-3</td><td>Corporate</td></tr>
<tr><td>TB7</td><td>TB7</td><td>SME</td></tr>
<tr><td>TB8</td><td>TB8-1</td><td>SME</td></tr>
</table>

Phase	Organisation	Informant	Division of bank
		TB8-2	Corporate
	TB9	TB9	SME
Three	EB4	EB4	No Division
	**EB5	EB5	No Division

*TB1-1 a Manager of SCF platform provider for TB1 **EB5 is a non-bank finance provider

The last group consists of five experts who provided additional data and clarification of specific issues, including one expert in phase 1 and four experts in phase 3, as shown in Table 4-4.

Table 4-4 Profiles of expert informants

Phase	Expert label	Role
One	EE1	UK Supply Chain Finance Consultant
Three	EE2	UK Public procurement officer
	EE3	UK Public procurement officer
	EE4	UK SME Association manager
	EE5	International Financial Institution official

4.3.5 Interview guide

An interview guide was prepared covering several topics concerning the key research issues and problems initially identified from the pre-fieldwork literature review. The interview guide comprised three different sets of topics to ask the three groups of informants. The guide was pre-tested in three pilot interviews (with one academic expert, one SME owner-manager, and one bank relationship manager) and amended before being employed. For example, the guide was amended to cover other forms of financing other than reverse factoring. Interview

questions were subsequently refined during the fieldwork to fit with the direction indicated by theoretical sampling (Glaser, 1978). Using semi-structured interviews gave me an opportunity to modify the order in which questions were asked, or change the way that they were worded. Interesting and important points were pursued in more detail or for clarification. Some questions were omitted if they were considered unsuitable or redundant.

The purpose of the SME interviews particularly was to gain insights into the individual perceptions and experiences of SCF relationships. First, I asked each SME informant to describe his or her supply chain and relationship with key suppliers and key customers. Then I asked about payment terms and related issues such as late or extended payments, then how to fill the working capital gap, if any, followed by access to finance and related issues, and then about SCF awareness and participation. The purpose of the bank and expert interviews was twofold: 1) to gain more general insight into the practice and offering of SCF; and 2) to understand relationships between banks and SME customers from the bank's viewpoint. Bank managers were asked to: 1) describe their involvement with SCF; 2) describe their main clients and services provided; 3) explain criteria in providing different SCF practices and, if possible, related costs. Experts were asked to: 1) describe their role in relation to SMEs or their involvement with SCF; 2) discuss enablers and inhibitors of SCF adoption; 3) give suggestions to improve the attractiveness of TSCF among SMEs, given the known reluctance of SMEs to adopt SCF. Although each interview covered the same broad questions, I also explored in-depth emerging observations.

The initial interview questions (see Appendix B) were based on insights derived from the literature and informal conversations conducted in May 2018. Although my original focus was on RF, I soon realised that there were other SCF practices in use and the main concern of

suppliers was not about adopting RF but about choosing the right SCF practice or practices for their businesses. During the first phase, I altered the way I interviewed, from using semi-structured interview questions to more in-depth open-ended questions ─ asking more general questions and letting the research informant guide me though their experiences. I only asked questions for further clarification or to prompt other related topics that I wanted the informant to talk about. I made notes during and immediately after each interview. Writing and reading notes enabled me to identify ideas and concepts that emerged from interview data and guided the subsequent data collection. Interview questions were changed as new ideas and concepts emerged resulting in the questions becoming more focused and aimed at understanding specific categories that emerged during the concurrent analysis.

Two factors contributed to the change in direction of research study as well as changes to the interview questions. First, the initial semi-structured interviews with SMEs, banks, and experts provided valuable insights into current SCF practices which were somewhat different from the academic literature. The initial fieldwork clearly indicated that there are two main types of SCF relationship and there was a clear need to include both SCF relationships in order to understand SCF adoption from the non-focal firms' perspective as these two SCF relationships appeared to have an effect on each other. As indicated earlier in this chapter, and as suggested in the literature review, the two types of SCF relationships either involve two parties or Dyadic SCF (DSCF), or three parties or Triadic SCF (TSCF). Therefore, the premises of the initial research that examined SCF in general and focused on reverse factoring specifically in particular, turned out to be inadequate. Second, the confusing and inconsistent terms used to refer to SCF practices meant that it was not necessarily easy for SME owner-managers to recognise or relate these terms to their financing experiences. This resulted in a change of data collection method

from semi-structured interviews towards more in-depth, open-ended interviews, ensuring that the interviews captured all relevant information regarding SCF practices.

4.3.6 Interviewing procedure

The majority of interviews were conducted face-to-face which allowed me to observe the informants' non-verbal responses and modify the questions accordingly. For example, when the managing director of a micro IT service SME (ES16) talked about his relationships with banks, he seemed unsure whether this was relevant to the research, but could be encouraged to explain more and indicate the need to examine banking relationships in addition to supply chain relationships. Additionally, there were telephone and Skype interviews conducted according to informants' preference and convenience. Compared to face-to-face interviews, telephone interviews were comparable in terms of length, content, and quality (Sturges and Hanrahan, 2004).

Informants were interviewed in places convenient to them such as cafés and meeting rooms. The interviews lasted between 45 and 180 minutes (90 minutes on average) and were conducted between December 2018 and March 2020. Most interviews were audio recorded with the permission of the informants and transcribed verbatim. Interviews with Thai informants were held in Thai, but only fragments that were subsequently coded were translated into English. There were two interviews where informants requested that the interview was not recorded, and field notes were used to record key points. Taking notes of key observations and information captured during the interviews together with memoing (see Figure 4-3 and Figure 4-4) not only enabled me to quickly conceptualise some of the codes before the interviews were transcribed, but also signalled to the interviewees that I was interested in their experience and story and gave time for informants to think or reflect on the questions.

Interviews were generally conducted with one informant at a time. However, there were five joint interviews where two informants took part in an interview together. These joint interviews were requested by the informants who willingly invited their colleagues or management teams to join. I found that joint interviews produced more comprehensive data, bringing about both shared and different understandings, strengthening the reliability (Arksey, 1996; Polak and Green, 2016). I was also mindful that in these situations drawbacks were possible, such as a dominating and/or silencing interviewee (Polak and Green, 2016). However, this appeared not to be the case here.

4.4 Data analysis

GT methodology recommends that data collection and analysis proceed concurrently. Timonen et al. (2018) argue, however, that this may not always be possible in practice, especially when the primary data collection method involves interviews and there is a need to accommodate informants' needs, especially in terms of time of participation. SME owner-managers, in particular, often made a rather abrupt decision regarding participation.

In keeping with the theoretical sampling notion of GT, I analysed data by coding key observations and important points noted in the field notes, combining these with a series of memos, to discover concepts and categories that would guide further sampling of informants, contexts and locations (Goulding, 2002; Birks and Mills, 2015). The field notes taken during and immediately after each interview allowed me to capture the informant's main ideas that could then be analysed for emerging concepts without the need to wait for full transcriptions (Holton, 2007). This way of conducting preliminary analysis of the interview data is considered to be effective when the initial analysis needs to be undertaken within a short timeframe. In fact, analysing data from field notes was in line with classic grounded theorists who advocate

coding from field notes rather than interview transcripts (Glaser and Holton, 2004; Holton, 2007) as they claim that too much detailed information can create distraction. Glaser (2007, p. 95) maintains that "GT is about a concept…and not about the accuracy of story talk". However, since coding from field notes instead of interview transcripts may be seen as lacking sufficient rigour (Holton, 2007), I analysed the empirical data once again from both the interview transcripts and field notes to 1) maintain a reasonable amount of rigour, and 2) benefit from the richness of qualitative data and ensure that I did not miss important patterns.

4.4.1 Coding process

Interview data were analysed through three coding stages. Birks and Mills (2015) refer to these as initial, intermediate, and advanced coding, but different versions of GT use different terminology for each stage as shown in Table 4-5. Regardless of terminology, the three phases of coding represent three levels of conceptual analysis and development (Birks and Mills, 2015; Chun Tie et al., 2019). Initial coding fractures the data and codes (i.e. selecting fragments of the interviews and field notes, and giving them categories), while intermediate coding builds on the initial codes, moving to more abstract conceptual categories (Birks and Mills, 2015). The last stage aims to integrate the more abstract categories into an emergent theory (Glaser and Strauss, 1967; Charmaz, 2014).

Table 4-5 Coding terminology (Adapted from Birks and Mills, 2015, p. 91)

GT version	Initial coding	Intermediate coding	Advanced coding
Glaserian	Open coding	Selective coding	Theoretical coding
Straussian	Open coding	Axial coding	Selective coding
Charmaz's constructivist	Initial coding	Focused coding	Theoretical coding

In this study, I used the terminology of first order, second order and aggregation dimensions to discuss these three coding stages, because this seemed to best capture the nature of the procedure. For this study, the first order coding stage essentially involved naming fragments of interview transcripts in terms of conceptual interest (for example 'Culture of late payment'). The second order coding involved an abstraction away from this, trying to find a more general, potentially theoretically significant name (for example 'Regionality'). The aggregate dimension coding organised the second order categories into more abstract categories, capturing the way informants dealt with the core category (for example 'Context' as a primary way of dealing with the 'Dyadic-Triadic distinction'). The intention was that this process of abstraction or generalisation ultimately provided more depth to the analysis: for example, telling me that the way actors reach an understanding of SCF is strongly shaped by the context in which they do this. A series of memos were written alongside the coding process in order to draw out these concepts. Coding was conducted primarily by me, but codes and categories generated were frequently discussed with my supervisors in supervisory meetings. Please refer particularly to Figures 5-3 to 5-7 in Chapter 5, showing the three stages and the coding that emerged at each stage.

All the coding stages required re-reading the data. The interview transcripts and field notes were examined either line-by-line, sentence-by-sentence, or paragraph-by-paragraph (Charmaz, 2006). Coding was then a process of conceptualising "the underlying pattern of a set of empirical indicators within the data" (Glaser and Holton, 2004, p. 12). It involved breaking down interviews into distinct units of meaning and giving a label or a code that best captured the meaning (Birks and Mills, 2015), regardless of the length of segments: either line, sentence, or paragraph where appropriate. Codes, often referred to as 'concepts', were constantly compared to previous analyses (both segments and concepts), within and across

interview transcripts, and more than one concept sometimes emerged from one segment or fracture of interview. Table 4-6 shows examples of first order codes and segments of data (often referred to as 'incidents' in the literature).

Table 4-6 Examples of first order codes and incidents

Concept (Conceptual code): *Awareness and knowledge*	
Memo: This is described in the literature: suppliers' lack knowledge of TSCF. But it's also about banks. Banks' focus is on focal firms, yet SME suppliers/customers rely on banks for knowledge of financing, so may not get information about TSCF. And banks' divisionalisation between SMEs and corporates means TSCF knowledge resides in latter so may not be available to SMEs	
Incident 1	"if you think about SCF and its application as I was saying before its mostly reverse factoring and reverse factoring is usually reserved to large suppliers. That means that SMEs are usually away from SCF" (EA2, 2020).
Incident 2	"I've not come across SCF particularly myself. I am aware that we do it, but it is mainly at a corporate level" (EB2, 2019).
Concept (Conceptual code): *Banking relationships*	
Memo: Small firms have transactional relationships with their banks, but larger firms have longer-term ones, so makes easier the dyadic-triadic move for smaller firms	
Incident 1	*"*So, this personal relationship you're talking about, that's reserved for bigger businesses and people with quarter of a million pounds or more in the bank you know who get personal bankers and personal service. The rest of us are just on the internet" *(*ES17, 2020).
Incident 2	"we have such a great relationship with them, and they can see we run our facility efficiently, there's no reason to move really. And every time we want a change, they've facilitated it, you know we've increased our limits our facility. They've always done it; we've never had a problem. They're definitely one of the better ones anyway." (ES5, 2020).

Interview data (field notes and transcripts) were reviewed several times through the constant comparative method where an instance was compared with other instances to identify similarities and differences. Following this, a concept (i.e. code or category) was compared to more instances to refine that category, or even change the category structure. For example, the categories of 'law' and 'legitimacy' were originally a single category, but with more data

becoming available the ‘law’ category became a sub-category of ‘regionality’, and ‘legitimacy’ became an important category in itself: Legitimacy categorised data about accounting problems with SCF and the use of SCF for questionable activities like off-balance sheet financing. New segments of text were coded with the existing or new concepts contingent on whether they fitted or not. Existing concepts were re-coded, i.e. given a new name if considered more appropriate.

Apart from selecting a meaningful name to label a concept, I also used the words of the informants, i.e. ‘in vivo coding’ (Glaser, 2002). In vivo codes (see Table 4-7) helped to preserve or capture the informant’s views, perceptions, or experiences (Charmaz, 2006), but they were only used where apt, i.e. the informant’s words expressed conceptual patterns (Glaser, 1978).

Table 4-7 Examples of in vivo codes

Concept (In vivo code): *Peace of mind (referring to having an overdraft)*	
Memo: Having overdrafts to tide the business over ─ just in case	
Incident	“and you know you plan for that, so you know, I mean we don’t necessarily use the overdraft all the time but if we had a critical piece of equipment that failed or we had something that we needed for a new customer or maybe it might be suddenly needed to make a particular product, a big volume of it, then I’ve got that there instantly ready to be able to pull on. So for me it means that I’ve got **peace of mind** and I can sleep at night because I’m not worrying about it because I know if I need it that’s there, its watching our backs really.” (ES7, 2019).
Concept (In vivo code): *We are naïve (referring to using only one bank)*	
Memo: Small firms used only one bank (single banking relationships) even though they could have multiple banking relationships─ Culture?	
Incident	“not like Europe, not like Thailand or India where you will have two bank accounts, you will have separate arrangements with both those banks, and you will have better facilities. And you will have better negotiation skills. In England **we are naïve** because we could do it, but we don’t. And the other thing is that the way that the banking system works in the UK is they will put a charge, or they will register that they are a company’s bankers. So, businesses believe that they should only have one bank. It’s scary in the UK. ” (ES11, 2020).

Theoretical saturation is achieved when no new properties or dimensions emerge from the data (Holton, 2007). In this study, this was judged as being achieved when interviews in combination with supporting documentation brought about no new changes to categories. For example, SMEs in Thailand were reluctant to use any external source of financing, and after several interviews there was no variation in this theme. An example in the UK was that SMEs repeatedly expressed a preference for dyadic finance.

4.4.2 Memoing

Memos are conceptual notes about the data and the conceptual connections between the categories (Glaser and Holton, 2004). Initial memos were generated as a result of constant comparison, whereas subsequent memos were generated from previous memos or from reading literature (Glaser and Holton, 2004). Memo writing played a key role in capturing my thoughts and ideas as well as tracking the development of concepts and the emergent theory, especially during the initial analysis from field notes. I began writing memos at the beginning of the study, and a number of memos were written during the data collection and analysis. Memos were used to write down my thoughts as they arose during the fieldwork, and also my reflections and ideas about codes when working closely with the field notes and interview transcripts. Figure 4-3 and Figure 4-4 present examples of memos.

Memo: 18 December 2018

…He had no idea about SCF… He only used company credit card but not very often. …. At this stage I thought the reason for him not knowing about SCF maybe because his company was very small, or he didn't want to use finance options.

…. It was interesting in terms of " condition" such as the nature of the company and "interactions" or relationships with others (customers, banks, etc) and the impact on the operations and finance options used.

...However, he mentioned about the need to have long term relationships as one of the conditions to consider SCF….

Due to the company's growth stage and circumstances, the relationship between the informant and the bank was "transactional" although he used only one bank.

Figure 4-3 Example of a memo written after an interview with an SME

Memo: 20 December 2018

Concept (Code): Working with clients: Customer Segmentation

…how customers were divided into different segments mainly in relation to their turnovers with often link to "complexity" of customers' needs and services provided.

Concept (Code): Not widely publicised

…why SF is not widely publicised? and who should be responsible to publicise it?

…the informants refer to SCF as " a risk solution", "risk free for small firms", "a very cost-efficient way of financing". They also mentioned that some large corporates also provided "quasi SCF" Interestingly that "prices are determined by the large firms while costs are passed on to small firms".

"Lack of awareness, nervous about using the system, and difficulty in dealing with powerful buyers" were mentioned. Regarding awareness and education, banks believe it's the buyer responsibility

Figure 4-4 Example of a memo written during the initial coding

4.4.3 Document analysis

In this study, documents were used as an additional source of data (Glaser and Strauss, 1967; Charmaz, 2014). Due to the sensitivity of SCF, using documents as data can help to address any incomplete understandings. Two types of document, elicited and extant documents, were

utilised. Elicited documents consisted of material that informants were involved in creating, and extant documents were where they were not (Charmaz, 2014). Elicited documents included copies of documents provided by informants, or documents informants asked me to retrieve from company websites, or the public domain after the interview. Extant documents comprised government reports, newspaper articles, and company websites. Perhaps most interestingly, one informant provided copies of the legal contracts for a specific reverse factoring arrangement. Approximately 30 documents were retrieved, reviewed, and coded, as shown in Table 4-8**.**

Table 4-8 Elicited and extant documents used in the data analysis

Type of document	Informant	Reference	Description
Elicited	EB1	DEB1	Details of SCF
	EB2	DEB2	Details of SCF
	EB3	DEB3	Flow chart explaining SCF practices offered
	TB3	DTB3	PowerPoint slides providing details of SCF offered by banks
	ES3	DES3	Details of SCF
	ES5	DES5-1	PowerPoint slides providing details of SCF offered by banks
		DES5-2	SCF contracts (Supplier Agreement)
		DES5-3	Annual reports The buyer of ES5
	ES7	DES7	Details of SCF
	ES9	DES9	Details of SCF
	TB6	DTB6-1	PowerPoint slides providing details of SCF offered by banks
		DTB6-2	Details of SCF
	EE5	DEE5	A copy of law and regulations in relation to SCF
Extant	All informants	-	All organisations' websites, if available
	EE4	-	Government reports (Carillion)
		-	News articles (Carillion)

4.4.4 Use of CAQDAS

I used pen and paper as well as memo writing during my initial data analysis from field notes. A computer-assisted qualitative data analysis software package (CAQDAS), NVivo12 Plus, was used during the first order coding of the interview transcripts to make the process of coding and retrieving data quicker and more effective. In addition, the software enabled me to constantly compare codes both within and between transcripts. There was also a memoing feature to add commentary, which could be linked to transcripts. However, the need to move concepts (first order codes) into different nodes and sub-nodes to form a category or a sub-category during second order and aggregate coding made it hard to focus on the data. Thus, I returned to manual coding ─ using pen and paper, and word processing software, to code the data in the intermediate and advanced coding stages. The coding was assessed in detail in conjunction with a second researcher (one of my supervisors) who independently coded two of the most productive interviews and compared first order codes with mine. The second researcher also discussed the complete coding system with me, referring regularly to the data, for the second order and aggregate coding.

It is also possible to do descriptive statistics, counting the numbers of segments that come under each code or category. This is not done because in this context it is not informative, and it is potentially misleading given the theoretical sampling approach. I discuss this in more detail, with an example, in Appendix C.

4.5 Rigour in grounded theory research

This section presents criteria for assessing rigour and the efforts undertaken to address it. The grounded theory methodology has its own framework for evaluation. Developed by Glaser (1978) there are four criteria: fit, work, relevance, and modifiability. These are helpful in

assessing how the substantive theory renders the collected data (Charmaz, 2014). Nonetheless, Charmaz (2014) proposes four new criteria, namely credibility, originality, resonance, and usefulness. In this section I discuss the application of these rather than other treatments of validity, such as Yin's (2014), as the four new criteria (Charmaz, 2014) are specifically meant to deal with grounded theory. Holton (2008) provides a more practical version of Glaser's four criteria, but I have followed Charmaz's criteria, which essentially covers similar ground. Several of these issues can really only be judged after the analysis is complete, which is perhaps a particular characteristic of grounded theory, so the following discussion makes references to later chapters.

4.5.1 Credibility

Charmaz's (2014, p. 337) first criterion is credibility. She suggests the following sub-criteria:

Creditability: Sub-criteria
1. Has your research achieved intimate familiarity with the setting or topic?
2. Are the data sufficient to merit your claims? Consider the range, number, and depth of observations contained in the data.
3. Have you made systematic comparisons between observations and between categories?
4. Do the categories cover a wide range of empirical observations?
5. Are there strong logical links between the gathered data and your argument and analysis?
6. Has your research provided enough evidence for your claims to allow the reader to form an independent assessment – and agree with your claims?

1. <u>Achievement of intimate familiarity with the setting or topic</u>

This was achieved by attending workshops on SME finance, interviewing academics in the field, and having informal discussions with a UK bank manager and an SME entrepreneur before data collection (as described earlier in 4.3.1.2).

2. Sufficiency of data for claims

This study includes two groups of key informants, SMEs and banks, which were asked to construct their understanding of themselves and of the others (i.e. SMEs discussing banks and banks discussing SMEs). There were 56 interviews in total, covering a wide range of sizes and industries, including both manufacturing and services. In addition, two of the interviews included detailed demonstrations of the platform being used for SCF. Supporting documents helped to fill out and clarify uncertainties in the interview data while expert interviews helped triangulate these data.

3. Systematic comparison between observations and categories

As described earlier in Section 4.4.1, constant comparison was an intrinsic aspect of the analysis.

4. Coverage by categories of the observations

The intention was to ensure that every interesting, and potentially significant observation from the interviews was categorised.

5. Strong logical links between data, argument, and analysis

As discussed in Section 4.2.3, the approach was abductive in the sense of moving between induction and deduction to ensure that the emergent concepts logically fitted together. But also, as will be shown in Chapter 5, an attempt was made to show the logical links between the categories using these data.

6. Evidence that allows readers to make an independent assessment

In Chapter 5, which provides details of the findings, the categories are all illustrated with quotations from the data. Different people may reach different interpretations, but this should explain how I arrived at the findings.

4.5.2 Originality

Charmaz's (2014, p.337) second criterion is originality, which is composed of the following four sub-criteria:

Originality: Sub-criteria
1. Are your categories fresh? Do they offer new insights?
2. Does your analysis provide a new conceptual rendering of the data?
3. What is the social and theoretical significance of this work?
4. How does your grounded theory challenge, extend, or refine current ideas, concepts, and practices?

1. Freshness and insightfulness of the categories:

The whole reason for using grounded theory is to avoid being constrained by existing theory. The abductive procedure means that the core category in particular is coming from the data, and that it is also combined with existing ideas. As explained earlier in this chapter, for example, the idea of service triads became incorporated in the process of developing the core category.

2. New conceptual rendering of the data:

What the core category especially does that is new is to show an important connection between upstream and downstream finance arrangements. The core category provides a new way of

categorising SCF arrangements as well as showing the significance of entangling the physical and financial supply chains in the way the actors think about SCF.

3. Social and theoretical significance

In the Conclusion Chapter, I summarise the intended contributions, both academic and practical. For example, I suggest that the category structure coming out of the analysis would help SMEs make systematic decisions about participation in SCF.

4. Challenging and extending current ideas

The Discussion shows how this work adds to the existing literature. In particular, it provides a systematic analysis of how existing transaction cost theory can, and cannot, explain these findings.

4.5.3 Resonance

The third criterion is resonance, comprising four sub-criteria (Charmaz, 2014, p. 337-338):

Resonance: Sub-criteria
1. Do the categories portray the fullness of the studied experience?
2. Have you revealed both liminal and unstable taken-for-granted meanings?
3. Have you drawn links between larger collectivities or institutions and individual lives, when the data so indicate?
4. Does your grounded theory make sense to your informants or people who share their circumstances? Does your analysis offer them deeper insights about their lives and worlds?

1. Fullness of the categories

This concerns the question of whether the analysis captures the full experience of the informants effectively. The modification to the research question was all about trying to capture what the informants felt about SCF, even though it might not have been specifically about reverse factoring. The in-depth, relatively unstructured nature of the interviews allowed the informants to express their experience of SCF without being too limited by the interviewer's preconceptions.

2. Revealing liminal and unstable taken-for-granted meanings

This is perhaps more applicable to other types of social research. But SCF as a specific idea, especially in the form of reverse factoring, is relatively new, as is the use of 'fintech' platforms – and in this sense, many firms are in a liminal state as they come to understand this and have to decide whether to participate in it. This has been an important part of the analysis.

3. Links between collectivities and individuals and institutions

This did emerge in the Findings (as discussed in the next chapter) in terms of the significance of the cultural and legal context for individual firms. Also, the entrepreneurialism of owner-managers emerged as a factor relevant to the way the informants thought, especially about control, in the context of SCF arrangements.

4. Making sense to the informants

Due to the practicalities of going back to quite a large number of informants in two countries, and the problems of revealing confidential and sensitive opinions and data, the informants were not asked whether the findings made sense to them. Nonetheless, after this PhD research is completed, I may consider sharing overall or relevant findings with businesses and banks in

Thailand as I return to work as an academic there. To share findings before completing my PhD thesis might be premature.

4.5.4 Usefulness

The last criterion according to Charmaz (2014, p. 338) is usefulness which encompasses four sub- criteria as follows:

Usefulness: Sub-criteria
1. Does your analysis offer interpretations that people can use in their everyday worlds?
2. Do your analytic categories suggest any generic processes? If so, have you examined these generic processes for tacit implications?
3. Can the analysis spark further research in other substantive areas?
4. How does your work contribute to knowledge? How does it contribute to making a better world

1. <u>Everyday use of the interpretations</u>

This is addressed in the Conclusion, in the section on Practical Implications. As mentioned earlier, the category structure does provide a systematic way of helping smaller firms, who lack specific technical expertise, to think about SCF. In fact, the study indicates that the technical aspects (such as interest rate advantages) of SCF are less important than relational implications.

2. <u>Generic processes suggested by analytic categories</u>

One of the main conclusions, detailed in Chapter 6, is that the key concern is the process of moving between different forms of SCF, which has general implications for relationships – and this is central to how actors think about SCF.

3. Sparking further research

The Conclusion suggests several avenues for future research.

4. Contribution to knowledge and to a better world

The Conclusion discusses the contribution, and suggests that the key contribution is to have provided an understanding of how actors, not academic observers, understand supply chain finance – an understanding which is primarily based on relationships and entanglements of these relationships.

4.6 Conclusion

This chapter explains how a grounded theory-based approach has guided data collection and analysis for this study. The chapter also presents research questions as well as discussing research philosophy (pragmatism), research approach (abduction), and qualitative rigour in the study. In the next chapter, the findings, which are the core category and its five related categories, are presented and discussed in relation to the collected data the categories emerged from.

Chapter 5 Findings

5.1 Introduction

This chapter presents the findings of this study organised around the core category, the Dyadic-Triadic Distinction, and its five related main categories that emerged as concerns expressed by the informants. These six categories (the core category and five main categories), explicate the thesis of Three is a Crowd that emerged as the central issue of SCF adoption decisions of non-anchor firms. In other words, as in the popular idiom of 'Two's company, three's a crowd', an arrangement of three parties introduces significant and problematic complexities.

In the rest of the thesis I will use the term 'anchor firm' or 'anchor party' to denote the corporate firm that usually is the initiator of more complex types of SCF, especially reverse factoring and distributor financing. This terminology comes from the Global Supply Chain Finance Forum. This means the other supply chain actor, typically an SME supplier or distributor, and the finance provider potentially, will be termed the 'non-anchor' parties. This is less ambiguous than referring to a 'focal firm'. I used the term 'focal firm' in the literature review because the academic literature used this term, but in an analysis that concentrates on the viewpoint of an SME it would be easy to interpret the SME as the 'focal firm'.

The remainder of this chapter consists of a further eight sections as outlined in Figure 5-1. Section 5.2 introduces the core category Dyadic-Triadic Distinction as well as providing an overview of how dyadic and triadic SCF practices were distributed over the participating firms ─ in order to show how the core category (the distinction between these two types of practice) was manifested. The sections that follow (Section 5.3 – Section 5.7) deal with each of the five main categories (Risk, Relationship, Awareness, Control, and Context), along with their related

sub-categories and concepts ─ showing in detail how the informants explained and responded to the meaning of the core category. The quotations given are verbatim. Section 5.8 describes how each of the main categories contributes to the core category, as well as the connections between the main categories themselves. The last section provides a summary and overview of the next chapter.

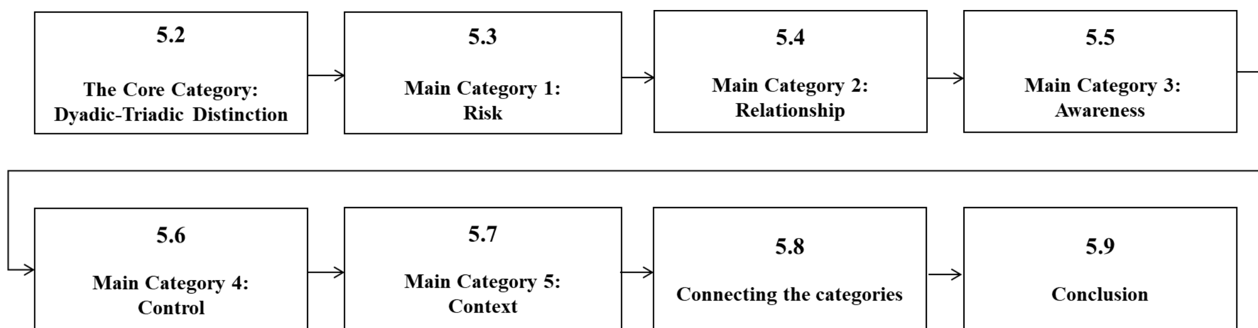

Figure 5-1 Flow of Chapter 5

5.2 The Core Category: the Dyadic-Triadic Distinction

While there are several grounded theory approaches (Glaserian, Straussian, and Charmaz's), the main goal of grounded theory is the generation of a core category that is a main concern of the informants, as well as how the main concern is processed, managed, explained, or resolved by those in the setting (Glaser, 1978). Criteria for choosing the core category include being central, relating to many categories, and reoccurring frequently in the data (Glaser and Holton, 2004). According to Corbin and Strauss (2008a, p. 103), the core (central) category:

> "represents the main theme of the research. It is the concept that all the other concepts will be related to. To identify the central category, the researcher must choose from among the many categories developed over the course of a study: the category that appears to have to greatest explanatory relevance and highest potential for linking all of the other categories together."

The overarching insight of this study is that there is an interplay in the actors' minds between two organisational forms of SCF: Dyadic SCF (DSCF) and Triadic SCF (TSCF). I coined these two terms according to a clear distinction made by research informants regarding the relationships that SME firms had with their own banks (DSCF) versus those with the anchor firm (i.e. corporate customers or suppliers) and its bank (TSCF). The core category is my interpretation of this main concern of informants. As described in Chapter 4, these DSCF and TSCF relationships were abductively conceptualised from the data on the basis of dyad-triad debates in the general supply chain literature (Wu and Choi, 2005; Wynstra et al., 2015). Even though dyadic and triadic relationships are essentially defined on the basis of whether two or three parties are involved respectively, the key distinction of DSCF-TSCF relationships is not only the matter of the number of parties. Rather, I distinguish TSCF from DSCF based on the cooperation of the stronger credit rating 'anchor firm' in providing either a credit guarantee (full or partial), or sharing required information about supply chain transactions and the SME firms with banks. This credit guarantee relationship in TSCF results in either the transfer or share of risks in reverse factoring (RF) and distributor finance, respectively. If the anchor firm only provides information, risks are mitigated instead of being transferred or shared. This results in variations of TSCF mechanisms, as found in Thailand.

It is also important to note that according to my DSCF- TSCF distinction, I classified factoring as DSCF even though it involves three parties, since there is no cooperation in terms of credit guarantees or information sharing from buyers. Even though factoring arrangements may involve banks validating invoices with buyers, this is not the same as cooperation where the banks and the buyer agree to cooperate, and where it is the buyer that is then the bank's customer. Risks in factoring relationships remain the same without being transferred, shared, or mitigated. Purchase order finance can either be classified as DSCF (i.e. Reindorp et al., 2018;

Tang et al., 2018) or as TSCF (i.e. Tanrisever et al., 2017), contingent on whether the buyer guarantees its purchase orders with the bank. Nevertheless, the findings from document analysis show that, in practice, purchase order finance was a DSCF arrangement, rather than the commonly discussed TSCF relationship in the literature. Purchase order finance is a pre-shipment financing similar to factoring where a purchase order is used as collateral instead of an outstanding invoice. In contrast to factoring, one of the two UK Early Payment Programmes ─ generally known as dynamic discounting, which is one of two main variants of RF according to Global SCF Forum (2016) - can be defined as TSCF under this Dyadic-Triadic distinction. Dynamic discounting involves three parties: the government agency as a buyer, its SME supplier, and a platform provider (e.g. Taulia or Oxygen Finance). In this TSCF relationship, the government agencies are both the buyer and the funder who share supply chain information with the platform providers.

5.2.1 DSCF relationships among the informants

Approximately half of UK SME informants (ten out of nineteen firms) had at least one DSCF relationship with their banks, as presented in Table 5-1. Three DSCF relationships were found, namely factoring, invoice discounting, and inventory finance. These findings reveal that invoice discounting was the most popular practice among them, used by five firms whereas only two manufacturing firms (ES2 and ES6) adopted recourse factoring. Even though both recourse and non-recourse factoring and invoice discounting were offered in the UK, all the SME participating firms used the former, which is typically less expensive than the latter since SME firms remain liable in case an invoice is not paid by their buying firms

Table 5-1 Use of DSCF practices among UK SME firm informants (total number of UK firms:19)

DSCF	No of firms	SMEs
Invoice discounting	5	ES3, ES5*, ES9, ES11, ES16
Inventory finance*** and Factoring** concurrently	2	ES2* ES6
Inventory finance and Invoice discounting concurrently	1	ES9
Overdrafts	3	ES7, ES8, ES17

* used concurrently with RF **provided by an LSP ***provided by a non-bank financial institution

The remainder of the UK firm informants were 1) two firms who used non-SCF options e.g. asset finance (ES10 and ES12); and 2) seven self-sustaining firms who avoided the use of external financing (ES1, ES4, ES13, ES14, ES15, ES18, ES19).

In the UK, a small and rather young ES6, which needed pre-shipment financing, could not gain access to inventory finance from banks. ES6's inventory finance was provided by a non-bank financial institution[2]. In contrast, the established ES9's inventory finance was provided by one of the big UK banks. As previously discussed in Chapter 2, post-shipment financing (e.g. factoring or invoice discounting) is usually adopted concurrently with pre-shipment financing (e.g. inventory finance) in order to pay back the latter as early as possible due to its relatively high financing costs. ES9 used relatively low-priced invoice discounting to pay back inventory finance, while ES6 had to use factoring for the same purpose owing to their size and limited years in business (i.e. not fully established), an issue that will be discussed in detail under the Context category. Other DSCF practices ─ purchase order finance and receivable lending[3] ─ were not used by SME informants or alluded to by banks and experts. Analysis of supporting

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[2] According to World Bank (2021), "Non-bank financial institutions provide services that are not necessarily suited to banks, serve as competition to banks, and specialize in sectors or groups" Source: https://www.worldbank.org/en/publication/gfdr/gfdr-2016/background/nonbank-financial-institution accessed 30 March 2021

[3] This is when receivable is used to secure a loan rather than selling, as in factoring (Global SCF Forum, 2016)

documentation showed that these two forms of DSCF are typically offered by non-bank financial institutions rather than banks. This is understandable considering the high risks, and hence high costs of these two DSCF practices. As discussed earlier, purchase order finance can also be arranged in a triadic form.

Table 5-2 displays the forms of DSCF offered by UK and Thai banks. While most banks offered a combination of overdrafts, DSCF and/or TSCF, EB4 and TB9 only offered overdraft facilities for their customers. EB5 is a non-bank financial institution that provides finance to individuals rather than corporations.

Table 5-2 DSCF offered by UK and Thai banks

Bank	**DSCF offered**				
	Recourse factoring	Recourse and non-recourse factoring	Recourse and non-recourse invoice discounting	Inventory finance	Overdrafts
EB1		√	√	√	√
EB2		√	√		√
EB3		√	√	√	√
EB4					√
EB5					
TB1					√
TB2					√
TB3					√
TB4	√			√	√
TB5	√			√	√
TB6	√			√	√
TB7	√			√	√
TB8	√			√	√
TB9					√

In contrast to their UK counterparts, nearly all Thai SME firms (seven out of eight firms) used neither SCF nor non-SCF options. This was partly because they were long established family businesses that were self-sustaining. Only TS8 used financing provided by the parent company and an overdraft from its bank. With regard to DSCF in Thailand, according to the Thai Factoring Association (2019), there were only eight banks offering recourse factoring. Five of these were informants in this study, namely TB4, TB5, TB6, TB7, and TB8. Other DSCF schemes, including non-recourse factoring, invoice discounting (both recourse and non-recourse) and inventory finance, were not yet offered in Thailand at the time of data collection. Likewise, purchase order finance and receivable lending were not offered either by banks or non-bank financial institutions. This was due to an absence of an enabling legal framework to support secured lending transactions. Even though a significant legal framework, the Business Security Act, was recently enforced in 2016, which encouraged some banks to start offering TSCF, it has not yet been fully assimilated by the industry. More detail regarding the Business Security Act is discussed under the Context category in Section 5.7.2.

5.2.2 TSCF relationships among the informants

There were two TSCF relationships explained by informants: reverse factoring (payables finance) and distributor finance (also called dealer finance or receivables finance). As explained in Chapter 2, reverse factoring (RF) is the relationship between an SME firm as a supplier, an anchor firm as a buyer, and the anchor firm's bank or banks. Distributor finance is the relationship between an SME firm as a buyer (distributor or dealer), an anchor firm as a supplier, and the anchor firm's bank or banks. According to both interviews and document analysis, distributor finance was not offered in the UK at the time of data gathering. Thus, the TSCF practice discussed among UK informants was RF, in which only two firms ─ ES2 and ES5─ participated. Two other firms ─ ES4 and ES8 ─ declined offers of RF from their

customers for reasons that are explained later in this chapter. Table 5-3 shows TSCF as offered by UK and Thai banks. Two out of five UK banks offered RF (EB1 and EB3) while, in Thailand, six out of nine banks (TB1, TB3, TB4, TB5, TB6, and TB8) offered RF to their corporate customers. Five Thai banks offered distributor finance (TB2, TB3, TB4, TB6, and TB8).

Table 5-3 TSCF offered by UK and Thai banks

Bank	**TSCF offered**	
	Reverse factoring	Distributor finance
EB1	√	
EB2		
EB3	√	
EB4		
EB5		
TB1	√	
TB2		√
TB3	√	√
TB4	√	√
TB5	√	
TB6	√	√
TB7		
TB8	√	√
TB9		

Unlike the UK, TSCF practices in Thailand were at a very early stage at the time of data collection. However, both RF and distributor finance were offered by some large banks but as variations of these two practices, as explained by Global SCF Forum (2016), rather than the

theoretical forms discussed in the literature and found to be practiced in the UK data. Owing to the infancy of TSCF practices, information regarding SCF primarily was gained from Thai banks rather than SME firms. More detail on variations of TSCF from the collected data is also discussed under the Context category in Section 5.7.2.

Thai banks started offering both RF and distributor finance around 2016, following the enforcement of the Business Security Act B.E. 2558. RF has been offered as two options, contingent on the level of cooperation from anchor firms. The first option allows SME firms to withdraw 100% of the invoice amount should the anchor firm fully guarantee the arrangement. In the second option, SME firms can only withdraw up to 90% of the invoice amount should the anchor firm agree to share the requested data only. The first option is clearly identical to the RF programmes offered in the UK whereas the second option is a variant of RF according to Global SCF Forum (2016), as described earlier in Chapter 2. Interestingly, while distributor finance was unavailable in the UK, it appeared to be popular among Thai anchor firms, compared to RF. According to TB6, more than 50 anchor parties adopted this approach with a portfolio size of around 35,000 million Thai Baht[4] (762 million British Pound) compared to only six anchor parties with a portfolio size of around 1,500 million Thai Baht (32 million British Pound) for RF arrangements in 2016 (DTB6-1, 2016). This is possibly because the anchor firm preferred increased sales downstream to payment term extension upstream.

[4] British Pound (GBP) to Thai Baht (THB) 1 August 2016: 45.8975 (Source: https://www.bankofengland.co.uk/boeapps/database/Rates.asp?TD=1&TM=Aug&TY=2016&into=GBP&rateview=D accessed 7 April 2021)

The following sections show how the Dyadic-Triadic Distinction is a main concern of informants, and they show how informants dealt with this concern through concerns with Risk, Relationship, Awareness, Control, and Context – the main categories of analysis as shown in *Figure 5-2*Figure 5-2. Each of the main categories is discussed in Sections 5.3 to 5.7 and comprises three to four sub-categories. Each sub-category is composed of several concepts, which are the results of first order coding. For example, the first main category, Risk, comprises four sub-categories: Risk Appetite, Risk Mitigation, Risk Sharing, and Risk Transfer. One of the four sub-categories, Risk appetite, is composed of two concepts: Sectoral Preferences and Self-reliance. Names of concepts, sub-categories, and main categories are capitalised. Certain words or phrases in the data that has been quoted have been underlined where they particularly indicate meanings in relation to concepts.

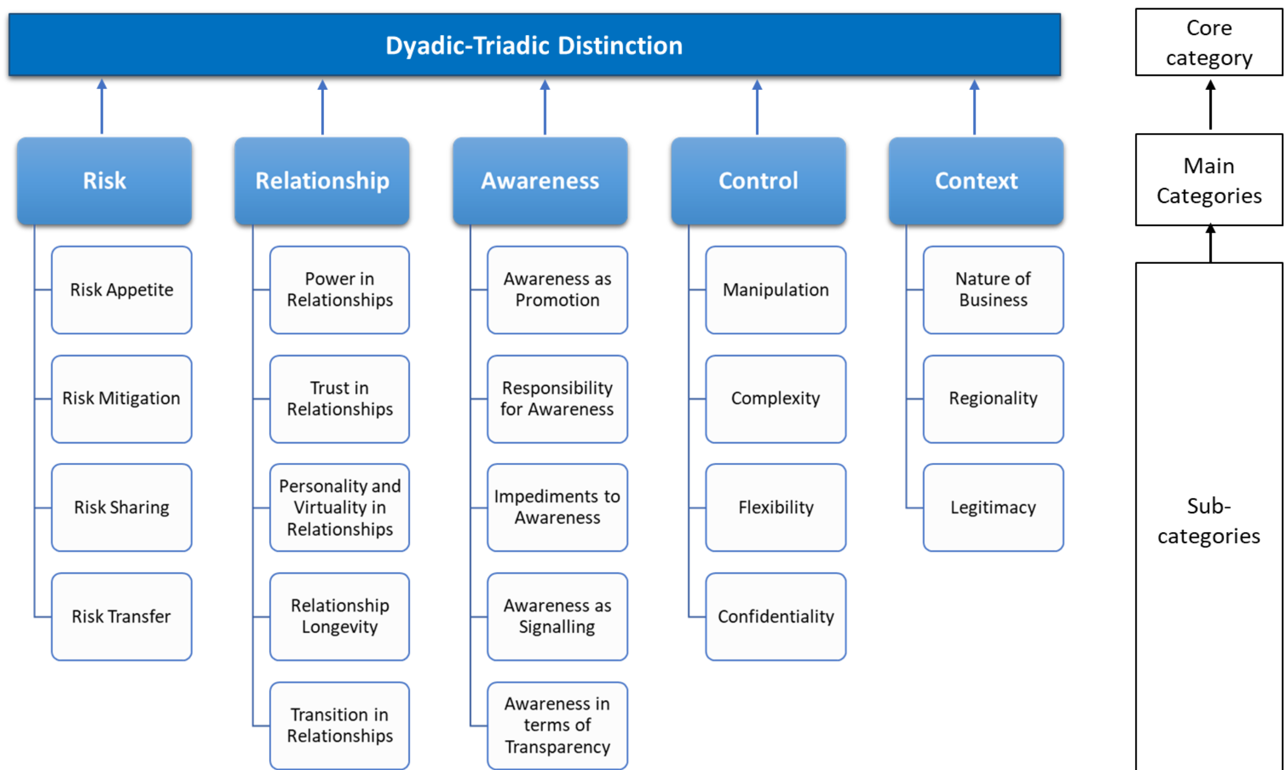

Figure 5-2 The Core Category, Main Categories, and Sub-categories

5.3 Main Category 1: Risk

One of the concerns of informants in relation to the SCF adoption decision was risk, and how they could manage such risk. Four sub-categories of Risk, including Risk Appetite, Risk Mitigation, Risk Sharing, and Risk Transfer, emerged from the interview data and supporting document analysis. These sub-categories and their concepts are summarised in Figure 5-3 and discussed below.

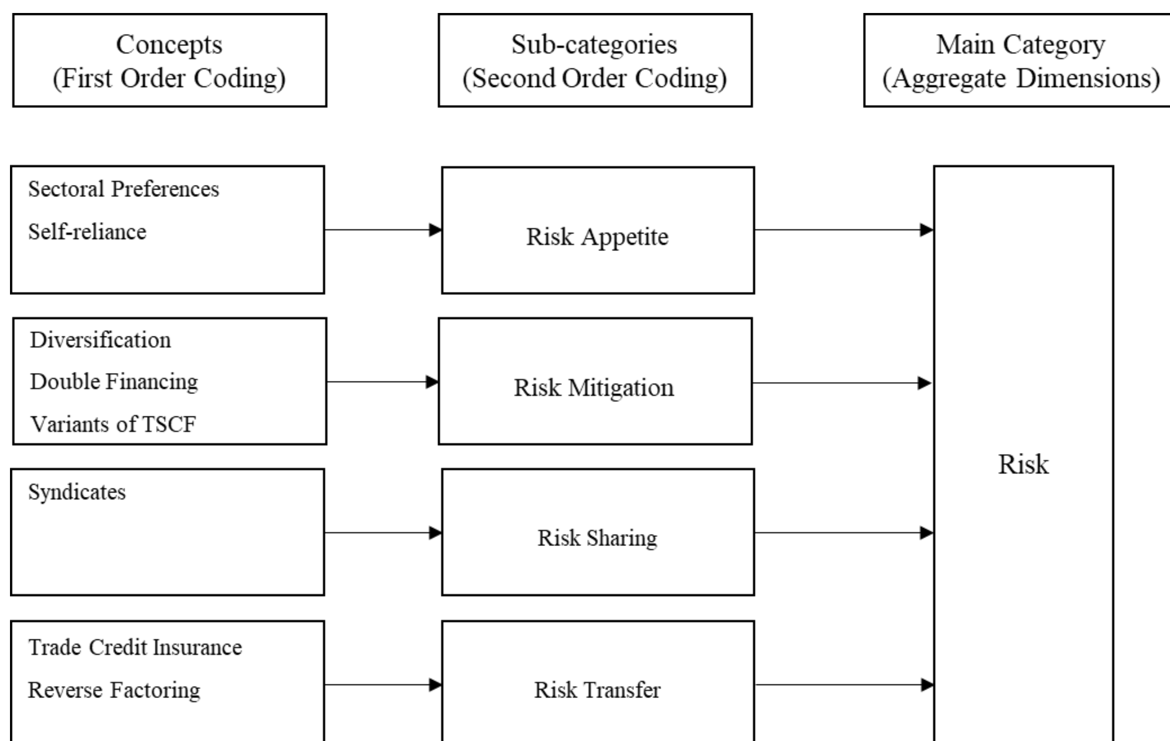

Figure 5-3 Concepts and four Sub-categories for Main Category: Risk

5.3.1 Risk Appetite

Risk Appetite is concerned with the type and degree of risk informants are able to accept or tolerate. Risk Appetite in providing SCF is evident at a UK bank in the following:

EB1-1 (Relationship Manager 1, UK Bank 1): "when we're looking at lending propositions for any type of customer the bank has a lending policy as a start point. So that drives the conversations around debt and requirements and whether we have appetite to fully lend to a customer's requirement or we have to consider other types of funding which might include things like supply chain finance etc."

EB5 (Founding Director, UK Finance provider): "What you find is that all lenders operate in certain niches, you'll find that some banks will operate in a certain niche. They're very very good at it but they don't go outside that niche because that's not where their skill set is. Our skill set and opportunity sat in a niche, there's about eight million customers we had potentially within our niche. So, we did a lot of analysis of the market, segments and where our business lay."

As a result of risk appetite, banks identified specific Sectoral Preferences (a concept in Figure 5-3) when providing DSCF or TSCF practices. Certain sectors or industries were identified as high risk, where banks had low, or no appetite for providing SCF:

EB1-1 (Relationship Manager 1, UK Bank 1): "the sector and how [we] views a certain sector. So, for example at the moment the retail and wholesale sector is under pressure because of Brexit and consumer confidence. So that sector in isolation [we] would take a view on that sector and that might be good or bad, there's nothing that the potential customer could do to influence that."

The above quotes show that sectoral risk appetite is temporary and, in this case, it is linked to a specific circumstance, i.e. Brexit. But in some cases, risk appetite was linked to characteristic practices in an industry, as shown in the following quotes:

EB2 (Relationship Manager, UK Bank 2): "So it's not a crisp delivery notice, raising an invoice, it's all stage payments against a predefined contract isn't it with a builder. So invariably as a funder we may not do that, that type of funding, but somebody like a, Bibby's Finance, they may do construction sector funding. So, there's different types of sectors that some people will fund, some people won't. Invariably as you will have seen with Carillion the construction sector carries a lot more risk and the way they pay, there's also retentions involved which makes it very very complicated because if I'm advancing you 80% of the invoice but then your client says well we'll keep back 5-10% it makes it very difficult."

This situation with retentions also shows the importance of the triadic-dyadic distinction to finance providers. In the dyadic case, retentions make it risky for the finance provider as they might not be able to recover the full value of the loan, and correspondingly in the triadic case, the risk is mitigated because as soon as the invoice is approved the buyer becomes responsible for the loan. RF was then praised as an apt practice for construction sectors, as alluded to by EB3:

EB3 (Relationship Manager, UK Bank 3): "Yes, it [RF] is a good product. I think it is a good product. It enables our customers to build their relationship with their suppliers. It works well in the construction industry."

On the other hand, banks sometimes just have no appetite for certain industries, which are simply interpreted as high-risk sectors from their viewpoint:

DEB2 (UK Bank 2's Supporting Document): "We work with businesses in a variety of industries, including recruitment and labour hire agencies, manufacturers, wholesalers and transport companies. Generally, we're not able to assist those in the construction or oil and gas industries."

> EB2 (Relationship Manager, UK Bank 2): “we don’t particularly get involved with that type of Construction funding. However, there are providers that will. That’s just a choice of the bank. Certain sectors we’re involved in, certain sectors we’ve got less appetite for.”

Also, banks appeared to have no appetite for a higher risk SCF mechanism ─ purchase order finance ─ a pre-shipment SCF in which the purchase order can be used as collateral. According to document analysis, purchase order finance was not offered by either UK or Thai banks, and not by many non-financial institutions, who often take more risk than banks. As discussed earlier, this pre-shipment SCF can be categorised as either DSCF or TSCF depending on whether the anchor firm (the buyer) is willing to cooperate by either guaranteeing, or sharing the required information with the funder.

Risk Appetite also emerged as the way seven UK firms, which represent around a third of the UK SME informants, (ES1, ES4, ES13, ES14, ES15, ES18, ES19), and seven Thai SMEs (TS1, TS2, TS3, TS4, TS5, TS6, and TS7) chose ‘Self-reliance’ for their working capital financing, i.e. relying only on internal rather than external financing. This essentially rules out both DSCF and TSCF relationships:

> ES4 (Operations Director, UK Manufacturer): “the challenge with that is you probably, we don’t grow as quickly sometimes. But there’s a lot less risk on the business. We want to sustain the business for a long time with lower risk of its kind of going wrong.”

> ES15 (CEO, UK Hospitality Firm): “So many different business models. Mine is not better than anybody else’s and I had to work a long time to get to this situation. But no, we don’t borrow money. And I am happier, I sleep well.

It is worth noting that these quotes could also be classified under the Control category, discussed below, and this suggests there are strong relationships between the two categories, a point that is returned to in Section 5.8 which analyses connections between categories. These quotes were treated primarily as instances of Risk because the informants use the word ‘risk’ or talked about ‘sleeping well’ or ‘security’ – so although they might involve degrees of control and the nature of relationships, it is risk which they appeared to focus on most strongly.

5.3.2 Risk Mitigation

Informants mitigated risk by means of ‘Diversification’ and preventing ‘Double Financing’. On the one hand, banks were concerned about the diversification of debtors (debt concentration) when providing DSCF. This, however, is not an issue in TSCF arrangements where banks only focus on the creditworthiness of the anchor firm:

> EB3 (Relationship Manager, UK Bank 3): “we check to make sure they’re spread, so there’s something called concentration of means. You know if someone has just got one debtor it’s unlikely that, there’s some providers that do it, but it becomes more risky because they’re just exposed to one debtor. Whereas if there are a number of debtors that’s how its well spread that means that its less likely that they will experience cash flow issues because they’ve got a large pool of debtors. So, we look at all of that.”

On the other hand, SME firms were concerned with becoming over-reliant on a few customers. As a result, SME firms were inclined to spread their customer base (i.e. ‘Diversification’) as a way of de-risking, as alluded to by both a UK SME and a Thai bank below. This can influence the decision to choose DSCF or TSCF, as the former typically includes all customers in one contract, while the latter is for only one customer.

ES11 (CEO, UK wholesale firm): "So do you have one customer owing you for the business that you've supplied to them or do you have lots of little ones. And in a business what you don't really want is one customer to be any more than 20% of your total revenue because if they don't pay then it hurts. So, you try to spread the deals around so that you've de-risked our business because you don't think that everyone is not going to pay, or you don't think that everyone's going to go bust on you."

TB6-2 (Relationship Manager 2, Thai Bank 6): "Thai suppliers tend to diversify their customer base. They're not reliant on one or two big buyers such as Tesco or Big C."

While diversification of the customer base is vital in DSCF relationships due to the need to reduce high debt concentration considered as high risk by banks, this factor has less significance in RF relationships where unconditional, irrevocable commitment to pay is provided by the anchor firm. As indicated below, however, this might not truly help alleviate late payment risk, and in fact appears to worsen the prolongation of payment.

Another important issue is the concern with 'Double Financing' of a supplier receiving two separate loans that both cover the same working capital gap. A supplier may well need back-to-back financing, so that it first receives inventory financing to fund the acquisition of inventory, and then receives post-shipment financing to pay off the inventory financing and cover the gap until its buyer makes payment. The latter will be cheaper than the former. To have both forms in place simultaneously is typically done through only one bank. This is because the boundary can be unclear between the assets used as security (inventory) and accounts receivable (invoices), as explained by ES9 who used both inventory finance and invoice discounting:

> ES9 (Finance Director, UK manufacturer): "So, we don't necessarily track and we're not really able to track when we sell a unit of stock whether it came off loan number 1 loan number 2 or no loan at all. So, in reality we take the 120 days but in theory we should repay it because otherwise there is a danger because we also use sales invoice discounting on the way out … There is a risk of double funding … but, in practice it's not practical to split out individual invoices and individual units of stock and trace them back to particular loans [inventory finance]. So, the way they control that is by having what is called the stock covenant. So, there's a ratio of the value of inventory net as creditors to the amount of debt that we have, and that ratio has to be more than 1.3."

Even though pre- and post-shipment SCF can sometimes be provided by two different funders, this creates problems of the charges that the two funders have over working capital assets, as illustrated by ES9 below. Furthermore, this can be anticipated to be an issue if the SME firm needs to participate in TSCF, which means they need to move some of the inventory or invoices away from the existing pre-shipment or post-shipment DSCF arrangement, respectively. This may result in banks increasing costs or terminating DSCF arrangements.

> ES9 (Finance Director, UK manufacturer): "But difficulty is if you start chopping up all your facilities then people are going to start getting nervous and these days you will not [be] getting any banking facility I would suggest in the UK without a debenture and once you sign a debenture there is a clear pecking ordering terms of who is able to appoint the administrator and that power gives control."

As before, from the example quotes above, it is obvious that there is a link between Risk Mitigation and Control, for both SME firms and the anchor firms' banks.

5.3.3 Risk Sharing

Risk Sharing is a strategy that both banks and SME firms use to manage risk. In contrast to DSCF arrangements that involve only one bank, TSCF can sometimes be provided by a 'Syndicate' where several banks share risks, especially a small UK bank like EB4:

> EB4 (Relationship Manager, UK Bank 4): "in my particular case we have three to four other banks that lend one customer money and we're quite happy to do that because, and they're happy with the situation because they don't want to be, well we don't want to be one bank lending all that money to one customer, so it reduces our risk profile."

In theory, distributor finance is risk sharing between the anchor firm and its bank where the anchor firm often partially guarantees the TSCF arrangement. However, according to the interviews and document analysis, this form of risk sharing TSCF arrangement appeared to be unavailable in the UK at the time of data collection. In Thailand, distributor finance was offered by five banks (TB2, TB3, TB4, TB6, and TB8) in its variant form where the anchor firm collaborated through sharing information rather than providing guarantees. This variant form of distributor finance means that Thai banks could not share risk with the anchor firm, but risk was, instead, mitigated through gaining access to data pertaining to the supply chain activities and transactions. Using documents supporting the interview provided by TB6 (DTB6-1), examples of information and cooperation that Thai banks typically request from the anchor firms in distributor finance arrangements are listed in Table 5-4. The buyers' track record in particular is relevant to the bank's risk in providing distributor finance.

Table 5-4 Information and cooperation requested by Thai banks in distributor finance arrangements

Information	Cooperation
▪ Buyers' list [List of SME distributors] ▪ Average sales volume to each buyer [SME distributor] ▪ Credit term, Credit limit ▪ Buyers' track record i.e. relationship and payment history, etc.	▪ Stop supply, if buyer defaults with the bank ▪ Continue supply, if buyer has outstanding debt with the bank ▪ Protection from trade dispute

5.3.4 Risk Transfer

Traditionally, businesses buy insurance as a way of transferring risk. 'Trade Credit Insurance' is often used by SME firms to transfer the risk of buyers defaulting over to an insurer in DSCF:

> ES16 (Director, UK Professional Service Firm): "Yeah in case a company went bust on us we would have the right to recover a large percentage of that invoice back. So, we're looking at that at the moment."

However, trade credit insurance may not be applicable to every business as alluded to by ES11:

> ES11 (CEO, UK Wholesale Firm): "Yeah there's another aspect to invoice discounting, you can actually have it insured with an insurance policy. But if you, what we looked at was the cost of an insurance policy in case the customer doesn't pay was something like about 0.5%. And because our ledger, our average order value is quite low it wasn't viable, it was too expensive. So, we self-insure…"

By participating in 'Reverse Factoring' arrangements, SME firms effortlessly transfer the default risk to banks since banks advance 100% of the nominal value of approved invoices with no recourse. In other words, risk is fully transferred away from SME firms so there is no risk

of non-payment, as commented on by ES2. EB1-1 even referred to RF as a "risk-free" solution for SMEs:

> ES2 (Director, Swiss Manufacturer): "What it also does is it brings us in financing on the day of invoicing rather than say 45, 60, 112 days. We don't have any risk of not being paid."

> EB1-1 (Relationship Manager 1, UK Bank 1): "The good thing is once they've drawn down their invoice on the [RF] platform even if they [buyer] don't pay, if they go bump in the meantime, we don't come back to them [supplier]to get our money back. So, its risk free."

Transferring risk via TSCF arrangements such as RF looks more promising because the 'insurer' is not a third party from another industry, but rather a supply chain party (the buyer) who is actually the main source of risk to invoice payment (the debtor). Furthermore, it is interesting to note that although the default risk in RF relationships is theoretically transferred to the bank, in reality the risk is often recognised by informants, from both banks and SME firms, as being shared between the anchor firms and banks, which proves an intricate pattern of TSCF relationships:

> EB1-2 (Relationship Manager 2, UK Bank 1): "There's no recourse there to the SME because we're, you know credit assessed the buyer really, so the risk is on them and us I guess really."

> ES5-3 (Finance Manager, UK Recruitment Service Firm): "once our invoice was approved on the system if we called our money down straight away that day and then [the anchor firm] didn't pay [Bank A] back that money that's between them, there was no liability on us whatsoever."

Risk in RF arrangements in Thailand was transferred to banks when they advanced 100% of invoice value, but banks sometimes mitigated risk by advancing only a fraction of the face value (up to 90%), contingent on the levels of cooperation provided by anchor parties, as discussed earlier in Section 5.2.2. As commented on by TB1, anchor firms in Thailand were not very keen to collaborate on or guarantee TSCF arrangements:

> TB1-1 (Manger, SCF Platform Provider for TB1): "There are issues of the willingness of the sponsors [anchor firms] to collaborate with us."

Nonetheless, Thai banks tried to offer a choice of risk transfer arrangements:

> TB6-3 (Relationship Manager 3, Thai Bank 6): "We have two options 1) the buyer guarantees the payment or 2) the buyer only shares needed information. We typically advance 70-80% if the buyer only provides us with related information. In this case, our risks remain with both the buyer and suppliers."

Unlike conventional invoice discounting or factoring, which covers the whole turnover, selective invoice discounting or factoring applies selectively to turnover. This is similar to RF, but SME firms can initiate the arrangement and integrate their ERP (or accounting system) with a bank's platform, as well as selecting either a single customer or a few customers for discounts. This is more intrusive than conventional invoice discounting or factoring where SME firms can submit the invoices to finance through an online portal or by email, but it gives greater visibility and better control for banks. This selective invoice discounting or factoring is not considered a "risk free" mechanism even though the single customer is the anchor firm. This is due to the lack of unconditional, irrevocable commitment to pay by the corporate buyer

(the anchor firm). Therefore, there are still risks from non-payment, late payment, or commercial dispute.

In brief, it is clear from the data that Risk was an important concern of informants and a main category in their understanding of supply chain finance, although risk sharing and transfer can be interpreted and evaluated differently, if not contradictorily, among non-anchor parties, particularly in terms of which party bears the risks and how risks are shared among parties. Dyadic and triadic SCF schemes differ considerably in the ways they share, mitigate and transfer the risks of late payment and defaults on payment that inevitably arise in supply chains, so risk is a natural category for dealing with the core concern of the Dyadic-Triadic distinction. However, the nature of the actors' risk appetites is also important in shaping how they consider this risk.

5.4 Main Category 2: Relationship

The second main category ─ Relationship ─ was considered by SME firms as being of central importance when making decisions on whether to adopt DSCF or participate in TSCF arrangements. SCF arrangements involve relationships between an SME firm and its bank (i.e. DSCF), or between an SME firm, the anchor firm (either as buyer in RF or supplier in distributor finance), and the anchor firm's bank (i.e. TSCF). So the nature of the relationships is a significant differentiator of DSCF and TSCF.

Another actor that appeared to play a significant role in SCF relationships was the supplier to SME suppliers, which was often also a small firm or an SME. These suppliers minimised or satisfied their SME customers' need for financing by providing them with non-financial resources that could substitute for financial requirements, for example, by organising an

invoicing schedule (i.e. ES4: Operations Director, UK Manufacturer) or giving a longer time to pay (i.e. ES7: Director, UK Manufacturer).

The following sub-sections discuss the five sub-categories of Relationship, and their concepts, which emerged as depicted in Figure 5-4. Each sub-category expressed a particular aspect of relationships described by the informants, and which seemed to influence SCF adoption decisions, especially the DSCF-TSCF transition, namely: 1) Power in Relationships; 2) Trust in Relationships; 3) Personality and Virtuality in Relationships; 4) Relationship Longevity; and 5) Transition in Relationships.

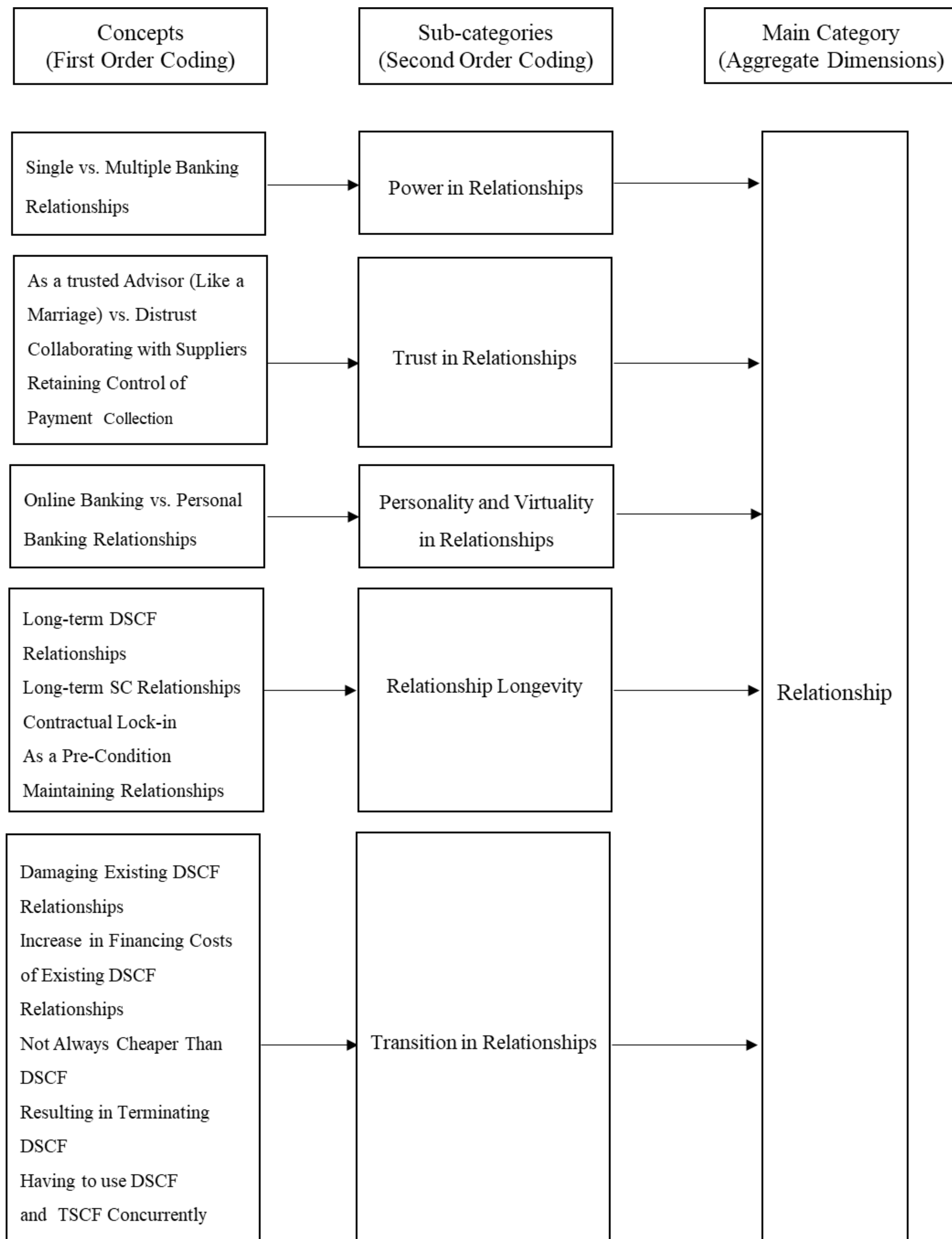

Figure 5-4 Concepts and five Sub-categories for Main Category: Relationship

5.4.1 Power in Relationships

Power in Relationships emerged as an important issue in understandings of SCF and making the decision to adopt or participate in different forms of SCF, so became the next sub-category. UK banks appeared to be more powerful, compared to their Thai counterparts in their relationships with SME firms:

> ES11 (CEO, UK Wholesale Firm): "That again the banks will negotiate with you, in fact the banks dictate to you what they will give you as charges."

ES10 described power in relation to the size of banks:

> ES10 (Managing Director, UK Financial Service Firm): "They were funding them, and they stopped yeah. That was during 2008-9. … a lot more SME owners in the UK who would say if I don't have to use a bank I'll store my money and I'll try and self-fund in a way, rather than use them, so again it's because we have bigger institutions that they have more power."

The power of UK banks was also due to most firms having Single Banking Relationships:

> ES11 (CEO, UK Wholesale Firm): "We should be smarter in the UK. If we used two banks, I think we'd have better bargaining, better negotiation skills, if you don't give it to us, they will. I think this is something we need to tidy up."

Unlike their UK counterparts, Thai banks regardless of their size, seemed to struggle with their lack of power in banking relationships due to competitiveness in the banking industry, where Multiple Banking Relationships are common. This made them appear more proactive in promoting SCF, particularly triadic SCF:

> TB2 (Relationship Manager, Thai Bank 2): "Since our products are similar, we mainly compete on the basis of interest and services. The [anchor firms] have bargaining power. For example, [A] uses more than one banks concurrently based on price. They want to give options to their dealers to choose which banks to make transactions."

Another power-based relationship can be seen between SME firms and anchor firms where the latter have more Bargaining Power, often due to size. Triadic SCF is sometimes said to help mitigate some of the power imbalance, because it uses the superior credit worthiness of the anchor party to offer lower interest rates to the non-anchor party. But equally, it may mean that the anchor party buyer could impose even longer payment terms, as evident for both ES2 and ES5 and discussed later in Section 5.6.1. The following quotes illustrate the power of anchor firms as a result of their size:

> ES2 (Director, Swiss Manufacturer): "So, there's a lot of bullying that goes on in this space as well of the big customers, they bully suppliers a lot. No, they really do. Our one big customer as I'd say they used to have payment terms of 90 days, they then upped that to 112 days just unilaterally."

> ES6 (Founder, UK Manufacturer): "it's mostly these big retailers, it's not really a negotiation, it's like these are our payment terms accept it or we don't work with you. So, we don't really have much of a say in this."

> ES10 (Managing Director, UK Financial Service Firm): "because I mean basically what happens is that the larger organisations in essence have the power because they have, they want to buy large quantities of widgets or whatever it is and its usually there is more than one small supplier that can supply that product."

5.4.2 Trust in Relationships

Banks saw their relationships with customers as being based on trust. This seemed to be the way that banks wanted customers to think of them – As a Trusted Advisor — in banking relationships:

> EB4 (Relationship Manager, UK Bank 4): "Have you heard of a saying…, people buy people and what I mean by that is that as a manager you want to do what they call, we call a trusted advisor. So, in the same sort of mould as their accountant and solicitor. And so basically when a customer needs a service or facility hopefully the first thing is you becoming in that trusted advisor status, the first call they make to you as a, their bank manager, not another bank".

While claims about trust may sometimes be used for marketing purposes by banks, SME firms thought the banking relationship to be Like a Marriage where they are able to give one another bad news. This kind of relationship is possible in DSCF between SME firms and their bank, but not in triadic relationships (between SME firms and the anchor firm's bank), so becomes an important consideration in the DSCF-TSCF distinction:

> ES9 (Finance Director, UK manufacturer): "the banking relationship is like a marriage. It is, you have to work together and you have to help each other because if you think about it from the point of view that the bank is the wife the way I think about it is if your wife is happy then you have the opportunity to be happy… If you don't have an honest and open relationship with your bank, they will be nervous, and they won't help you. … If your bank trusts you to tell them bad news as well as good news so that they have an opportunity to access facts...".

Trust was closely linked to power. A powerful party, such as a bank or anchor firm exercising their power, often resulted in Distrust in relationships as described by ES15. This is important

as in most dyadic and all triadic SCF arrangements external finance providers like banks are necessary.

> ES15 (CEO, UK Hospitality Firm): "I do not trust banks to have the same objectives as me. So, the banks will lend me money very happily for a mortgage but then if their own ratios change and their business changes, they will come to me because they know I have an asset and they will say we need our money back. It's not our fault, it's not your fault. And I will say it's definitely not my fault, but it is your fault because you lent too much money. And they'll say that doesn't matter, we want our money back. And that's why I do not like banks."

Distrust in banks was another important reason for firms not to use external financing, thus ruling out triadic arrangements. This was also seen in dyadic arrangements involving a finance provider, rather than a supply chain partner:

> ES17 (Managing Director, UK IT Service Firm): "I wouldn't trust them. I wouldn't go to a bank to borrow money which was secured against anything."

More importantly, SME firms believed that having a good, trust-based relationship with their own suppliers, who were often SMEs, was a way to help them reduce or avoid the need to use external financing through securing stock and hedging prices (i.e. ES7) or payments when goods arrived at the port (i.e. ES12). In this sense, a within-supply chain dyadic arrangement ─ Collaborating with Suppliers ─ was preferred to a dyadic arrangement with a finance provider:

> ES7 (Director, UK Manufacturer): "One of our biggest suppliers is glassware obviously and we have a relationship with them and terms that are very special for us, so we have a line of

credit with them and we don't pay on 30 days, it varies according to, if we have a big order in, for example we've got a big order at the moment on the books for around about 100,000 jars but we can't afford to buy 100,000 jars in one go. So, we'll let them know about the order so they've got advance warning and they will secure that stock for us and then we draw on it as we need it and they'll give us maybe 60-90 days payment terms on it… And sometimes with a few others if there's sort of hedging pricing, so for example if we know butter or sugar is going to suddenly go up in price next month then we'll buy more in this month but the supplier will give us a little bit longer to pay because we're just buying a big bulk amount."

ES12 (CEO, UK Manufacturer): "Oh they [Chinese suppliers] would have to be paid pro forma yes. They pay, some of them we've got a really good relationship and we don't pay them until the goods get to Felixstowe. So, when the container gets to Felixstowe then we have to pay them."

In addition, ES4 was able to escape the pressure to participate in a triadic arrangement because of the relationship with its own suppliers:

ES4 (Operations Director, UK Manufacturer): "So I spoke to our supply chain and said this is the issue, how can we manage that? And we agreed better terms with our supply chain so that they supported us to be able to move forward and that's how we avoided having to do that."

Compared to factoring, banks had to invest more trust in their customer (SME firms) in invoice discounting relationships because it allows SME firms to Retain Control of Payment Collection in order to repay the loan:

EB3 (Relationship Manager, UK Bank 3): "The risk is always, yeah so we're heavily reliant on the customer to collect those debts. So, when we look at invoice finance or factoring, we're

> always looking at the collectability of those debts. So, invoices raised, are there any contractual issues that might mean the debtor refuses to pay? So, there's a more element of trust in the customer's systems and abilities in an invoice finance line than necessarily factoring line because the institution itself is collecting those debts and invoices."

This need for trust between a bank and the party it is financing (the non-anchor party) exists in DSCF but is avoided in TSCF because the invoiced party (the anchor firm) is also the guarantor. The Carillion case shows, however, that the bank may not have good reason to trust the anchor firm.

5.4.3 Personality and Virtuality in Relationships

Some informants made comments about how their relationships with banks have changed, i.e. the use of internet and Online Banking means decisions are not made on a personal level but through virtual interaction.

> EE4 (UK SME Association): "Yeah I think a lot of the banks, because the banks had to make savings, reductions in their staff, a lot of the businesses used to have a bank manager and they'd go and see their bank manager, talk to their bank manager and then it was no no if you want to apply for a loan you do it with the computer. You have to meet the criteria that the computer is looking for, there's no relationship there. So that relationship was broken".

> ES17 (Managing Director, UK IT Service Firm): "Well we're on online banking now so we don't have a personal relationship with anybody".

One of the firms was reminiscing about having Personal Banking Relationships:

ES17 (Managing Director, UK IT Service Firm): "the personal side of things that you used to have when I was younger you had a personal relationship with your bank manager as an individual or as a business, you could go to somebody in an office somewhere nearby and they'd be your bank manager and they'd know your name and this sort of thing.".

While some DSCF relationships started to move online, most TSCF transactions were mainly done virtually through a third party's platform, so TSCF is more closely associated with virtual relationships:

EE1 (Expert, UK Supply Chain Finance): "You need the platform to capture the transaction, …. So the, if we look at [a platform provider] it takes the purchase order from the big customer to the supplier …and matches the two and then says then you can, as the supplier you can log into the system and say yes I wish to take early payment against that particular transaction."

In TSCF arrangements, unlike DSCF ones, the anchor firm's bank had a specific, operational relationship with the SME firms. As described by ES5 (Chairman, UK Recruitment Service Firm, provided as a supporting document complement to the interview), there were two separate agreements in a TSCF arrangement, described as a Supplier Agreement (i.e. Receivables Purchase Agreement) with the SME firm, and a Client Agreement (i.e. Service Agreement) with the anchor firm. This reinforces the point that it is the anchor firm, not the non-anchor firm, that is the bank's client in TSCF relationships. And the nature of the Supplier Agreement shows that the relationship is conceived of as an electronic one, based on the use of a digital platform:

EB1-2 (Relationship Manager 2, UK Bank 1): "We do have to engage also with the suppliers [SME firms] that the buyer has. So, they will let us know who their suppliers are, and we have

to get documentation from them. So, things like a supplier agreement, a board resolution if they're a limited company and an electronic banking agreement and a supplier registration form. So, as a supplier they do need to register for the service before they can use it because we have to allow them access to the platform so that they can upload."

Since trust and personal relationships help build and maintain long-term relationships, as witnessed in dyadic relationships with SME firms' banks and SME suppliers, the implication of moving to triadic arrangements, based on virtual platforms, is that relationships between non-anchor parties and their banks become weaker. Equally, the implication is perhaps that having and becoming used to impersonal or virtual relationships is that it would be easier to move from dyadic to triadic arrangements.

5.4.4 Relationship Longevity

SME firms indicated good and, often Long-term DSCF Relationships, with their banks:

ES5-3 (Finance Manager, UK Recruitment Service Firm): "we use [Bank B] and they're really good they will speak to us; they want to work with us."

ES16 (Director, UK Professional Service Firm): "because we'd worked with [Bank A] for so many years and they know our clients inside out they would allow us to present our numbers say on 20th instead of 28th or 31st"

Often, SME firms also had Long-term SC Relationships with their own suppliers, which helped one UK Manufacturer avoid adopting both DSCF and TSCF practices:

> ES4 (Operations Director, UK Manufacturer): "I don't know if that would have happened if it had been a new supplier. Its only because we worked with them for a long time and explained what the situation was and then told them what I wanted to do, and would they do it and in the future, there'd be more orders for them."

DSCF arrangements were often long-term relationships even though they involved 1 to 2-year renewable contracts:

> ES16 (Director, UK Professional Service Firm): "our business works absolutely perfect for invoice discounting, so ID. Not factoring, ID, invoice discounting. It's something we've used for, I would say I've probably used invoice discounting and I've never changed, albeit I have benchmarked them, with [Bank A], I've used them for 10 years."

In addition, DSCF arrangements, both factoring and invoice discounting, involved Contractual Lock-in conditions, including a minimum duration before termination, a period of notice required to terminate, and termination fees or penalty fees. Thus, leaving DSCF relationships could be costly, as explained by one Relationship Manager at a UK bank:

> EB3 (Relationship Manager, UK Bank 3): "it depends each institution may have a notice period. So, go to the bank say no I want to move, some institutions may say well serve notice, so you let the institution know of your intent to leave and then it's generally three months, sometimes three, sometimes six. And it can also be the bank that says they don't want the facility anymore. But that notice period is always adhered to by both sides. So, you have a contract, generally it's a 12-month contract with a three-month termination clause."

> EB3 (Relationship Manager, UK Bank 3): "It depends on the contract agreed, but if you've signed a 12 month and it could be that there are penalty fees to pay to get out early. So, I'm

> talking to someone who's got that very problem where the current facility they've got they're locked into a 12-month contract and they can't move until that's ended, a bit like a phone contract really."

More importantly, the following quotes show how a typical one or two-year DSCF contract could often become a long-term relationship where leaving is not easy due to lock-in effects:

> ES3 (Founder and Finance Director, UK Manufacturer): "So you're talking about 10 years really that we've used it. You would like to think that if you could make sufficient profits to buy yourself out of it that would be the idea because at any one time, we might owe invoice finance £400,000 because that's the value of our debtor book. So, but to do that you've got to be making massive profit…Will we ever come out of it, I don't know. It's a very very handy tool. Very very handy."

> ES12 (CEO, UK Manufacturer): "…the difficulty with invoice discounting is trying to get out of it at the end. When you join it, immediately you join it you get a lump of money. But once that lump of money is gone, you're now stuck with invoice discounting and there's no benefit. You've got that lump of money and it disappears and then in a year's time all you're doing is paying for invoice discounting year after year after year. And trying to get out of it is really difficult because of course you need to have enough money to be able to afford to kind of pay back that, because as you come out of invoice discounting you're going to have a gap in your cash flow aren't you."

TSCF arrangements involved much more short-term relationships between non-anchor firm and bank. However, TSCF arrangements required long-term relationships between SME and anchor firm as a Pre-Condition:

EE1 (Expert, UK Supply Chain Finance): "it's quite complicated and it requires time and effort and possibly money to set up a supply chain finance relationship. Therefore, you would only do with companies who you wish to be, who are going to be supplying you for a long time… So it is, it should be for those suppliers who you will have a long-term relationship with even if it's a very small supplier."

ES1 (Managing Director, UK Educational Service): "it seems to me it would have to be with a company where I knew that I was going to be having a long-term relationship and where, well where both parties, where they and my company could see that we were in this for the long term."

In a similar vein, a UK Recruitment Service Firm (ES5) agreed to participate in TSCF relationships aiming to Maintain Relationships, hoping that their contract would be renewed in the following years:

ES5-3 (Finance Manager, UK Recruitment Service Firm): "Supply chain finance it was something that we would never have looked at before, but we used it as part of the negotiations when we were renegotiating the contract."

Likewise, one of the reasons for the popularity of invoice discounting was that SME firms could Maintain Relationships with customers, compared to factoring where SME firms needed to outsource credit control and payment collection to banks.

ES11 (CEO, UK Wholesale Firm): "my preference is invoice discounting because we maintain the relationship with the customer."

Overall, it is apparent that the longevity of relationships can be an important factor in the informants' understandings of SCF, and especially in SME's considerations of whether to move from dyadic to triadic SCF.

5.4.5 Transition in Relationships

As indicated above, the rationale for an SME accepting an anchor firm's offer of TSCF was sometimes to keep or Maintain Relationships with the anchor firm:

> ES5-2 (Operations Director, UK Recruitment Service Firm): "I think we felt it would have put us in a better position when contract renewal came up as well. So, if we were following the process around invoicing more likely would have renewed the contact with us then they would have done…They would have reconsidered that position had we not signed up to the supply chain finance."

Nonetheless, entering into TSCF could result in upsetting or Damaging Existing DSCF Relationships with a firm's bank, as there is a need to move the anchor party's invoices out of the existing factoring or invoice discounting contracts. The following quotes show the participation of a UK Recruitment Service Firm (ES5) in TSCF arrangements and the impact of DSCF-TSCF transition:

> ES5-1 (Chairman, UK Recruitment Service Firm): "Well in a way the bank, our bank didn't like it, [Bank B] didn't like it because they're having some business taken off then. So, £6 million worth of business they were losing."

> ES5-1 (Chairman, UK Recruitment Service Firm): "Yeah it was more expensive than our current banking arrangements allowed us. And it also caused problems as I explained earlier

> because we invoice discount, we've got a confidential invoice discounting facility, ... And that arrangement had to be stopped with the organisation because you can't have the two working in conjunction with each other, which is probably an issue in the UK because lots of SMEs use factoring or invoice discounting in order to fund their cash flow. It's actually the UK banks, one of the favourite ways of lending money is on the back of the sales ledger you've actually got…So, we just removed that account from our invoice discounting facilities."

This action led to an Increase in Financing Costs of Existing DSCF Relationships, i.e. factoring or invoice discounting, since the anchor's party's invoices often constitute a large part of the total turnover. Removing these invoices out of the contract means a SME's bank loses its profit, while the overall risks increase. This resulted in an increase in financing costs as the bank often raises the existing interest rate to compensate for the loss and increased risk.

> ES5-1 (Chairman, UK Recruitment Service Firm): "Potentially because of the volume it was probably £4-5 million a year, that contract. Because that was coming out of the invoice discounting facility it might have meant when we came to renegotiate the interest rate and the costs for the invoice discounting facility that it might be more expensive because we didn't have the same volume."

Most importantly, TSCF is Not Always Cheaper Than DSCF arrangements, as often claimed in the literature, when it is in the context of a long-term relationship. ES5 explicitly stated below that TSCF was more expensive.

> ES5-1 (Chairman, UK Recruitment Service Firm): "That was actually greater than the cost of us financing it ourselves through our own bank just because we had such a good deal with our own banker"

EE1, an expert in UK SCF, also pointed out that TSCF may not always be cheaper than DSCF arrangements:

> EE1 (Expert, UK Supply Chain Finance): "But that doesn't always happen, it may be that the supplier has a cheaper source of finance through invoice discounting, just normal factoring, ordinary factoring. Often times smaller companies have interest rates which are 10-15% per annum, whereas they're being offered a supply chain finance programme where they're borrowing money at 5-6% per annum. So, it doesn't always apply but that's the way it should work."

Furthermore, the Managing Director of a UK Manufacturer who used a relatively expensive overdraft believed that TSCF was more expensive:

> ES8 (Managing Director, UK Manufacturer): "It costs us money but to run an overdraft is cheaper than giving an additional 2% to a customer on a large order. So, if we did that for all the customers it would be a lot more expensive."

The perception that an overdraft was cheaper than TSCF may be true, or it could just be because ES8 did not thoroughly calculate the cost of financing, as pointed out by a Managing Director of a UK Financial Service Firm:

> ES10 (Managing Director, UK Financial Service Firm): "I would doubt necessarily that SMEs calculate the cost of finance in that way and that's why, so whilst sort of supply chain finance look very attractive in the calculation you would present in I think it's more difficult for the SME to necessarily work on that basis. I think they just look at if I'm going to take this

contract, I need finance for it. It's that extra amount of finance that they need not necessarily all the opportunity costs surrounding it that were in the calculation."

Furthermore, moving part of a set of DSCF contracts away may Result in Banks Terminating the DSCF Contract since an account may no longer be profitable:

EB3 (Relationship Manager, UK Bank 3): "And it can also be the bank that says they don't want the facility anymore. But that notice period is always adhered to by both sides. So, you have a contract, generally it's a 12-month contract with a three-month termination clause."

Despite participating in a RF programme, SME firms often ended up Having to Use DSCF and TSCF Concurrently, since TSCF practices only cover one anchor firm (either the buyer or supplier). This was evident for both a Swiss Manufacturer and UK Recruitment Service Firm, which still used factoring and invoice discounting while participating in RF:

ES2 (Director, Swiss Manufacturer): "Yeah so, we basically have two schemes, one is just the simple invoice discounting, so we take out, we get a, well we sell the invoices. Once you've invoiced the supplier, the customer, we "sell" the invoice to the bank and the bank pays us and then of course the payment route changes to between the bank and the customer."

ES5-1 (Chairman, UK Recruitment Service Firm): "Yeah, we did separate, so we just removed that account from our invoice discounting facilities…and use invoice discounting for other customers."

The way a transition between DSCF and TSCF was understood was also a function of how TSCF was perceived as more complex, due to the need to operate within a new relationship:

> ES11 (CEO, UK Wholesale Firm): "the problem in using a supply chain payment system is that we have to liaise with the third party's bank, we have no relationship with that bank and the client needs to actually give that bank authority to liaise with us. So, we can then send the payment, an invoice request to them, they then pay us."

The complexity of TSCF relationships arises because the buyer, not the supplier, is the bank's client, even though the bank is funding the supplier:

> ES2 (Director, Swiss Manufacturer): "it's basically, that supply chain financing is a relationship based between the customer and the bank or the financier whereas invoice discounting, straight invoice discounting is based on a relationship between us the supplier and the bank."

From a bank's standpoint, the 'arrangement' is nonetheless between the supplier and themselves in the context of their client relationship with the buyer:

> EB3 (Relationship Manager, UK Bank 3): "[RF] is an arrangement between the supplier and the buyer's institution to release the money early if they want. So, the supplier benefits from a cheaper funding then they might do and our customer at the same time develops a stronger relationship with the supplier."

Generally, these data show that the nature of relationships is central to informants, impacting on the way they make sense of SCF and how they differentiate between different forms of SCF. In particular, this last sub-category (Transition in Relationships) shows that the significance of moving to TSCF always has to be considered in the context of the existing DSCF relationship that a firm moves away from.

5.5 Main Category 3: Awareness

Awareness emerged as a significant category in several distinct ways. The following sub-sections discuss the five sub-categories: Awareness as Promotion, Responsibility for Awareness, Impediments to Awareness, Awareness as Signalling, and Awareness in terms of Transparency, as shown in Figure 5-5.

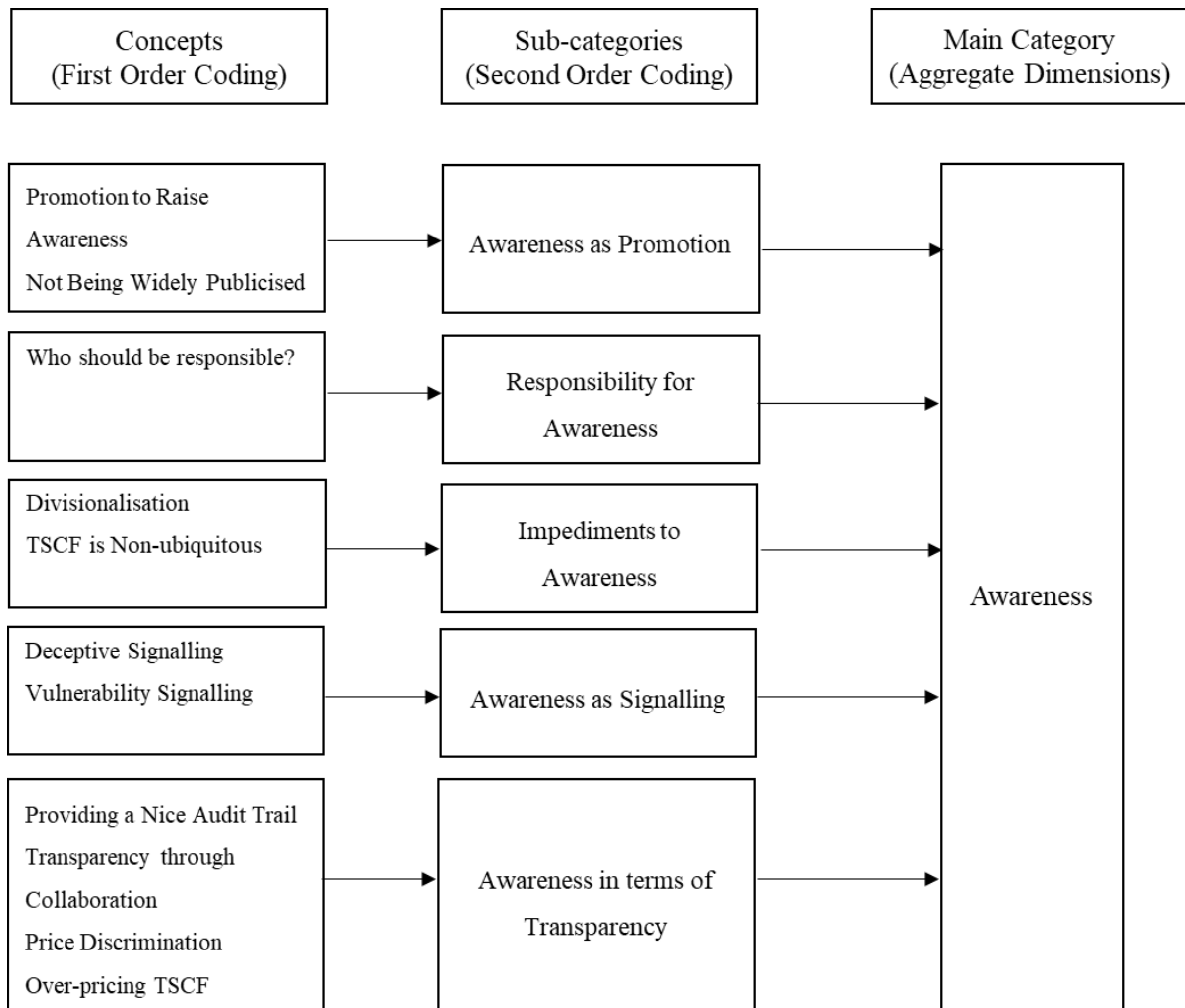

Figure 5-5 Concepts and five Sub-categories for Main Category: Awareness

5.5.1 Awareness as Promotion

TSCF practices, as rather new SCF mechanisms, depended primarily on Promotion to Raise Awareness, often by anchor firms:

> ES5-2 (Operations Director, UK Recruitment Service Firm): "they had, they initially produced some sort of marketing material telling us what it was and why they were doing it… they did a PowerPoint presentation and then they actually came to our offices in the end and did another presentation to show us."

The way in which awareness came from promotion means that it could not necessarily be treated as objective or unbiased knowledge of SCF. However, it appeared that there was still low awareness among SME firms, and one of the root causes was due to it Not Being Widely Publicised:

> EB1-2 (Relationship Manager 2, UK Bank 1): "Most of the time they've never heard of it, so they're not aware of it as well…So yeah, I always used to talk to customers about, around it because you know it's a solution there that I don't think many of them are aware of at all. It's not really widely publicised is it?"

The issue of lack of publicity could be found both in private and public sectors. For instance, the SCF Scheme, which is effectively an RF arrangement, despite being initiated and promoted by the UK government, seemed to fail to raise awareness among SME firms. A Public Procurement expert and SME Association expert commented as follows:

> EE2 (Expert, UK Public Procurement): "I hadn't heard of it [the UK Government Supply Chain Finance Scheme] but I looked it up when [X] mentioned it to me"

EE4 (Expert, UK SME Association): "I'm not aware that it's been fully successful. I'm not, I must be honest I'm not familiar with it particularly…There also something like early payment programme but that like the supplier who supply to government department they can join early payment programme. I'm not sure it the same thing or not."

While the UK banks appeared to refrain from getting involved in raising awareness of TSCF arrangements, Thai banks took a proactive role in raising awareness, owing to high competition in the banking sector. This awareness campaign by banks was used to sell TSCF solutions.

TB3 (Relationship Manager 1, Thai Bank 3): "We actively approach [anchor firms] to educate and convince them to adopt supplier financing [RF] or buyer financing [distributor finance]. [TSCF arrangements] cannot happen without the sponsors [anchor firms] understanding how the arrangements can benefit them."

This difference between UK and Thai banking practices perhaps reflects more generally the situations in developed and emerging economies; this is discussed under the main category Context.

5.5.2 Responsibility for Awareness

One of the concerns in relation to awareness was who was responsible for raising awareness for TSCF practices. Unlike DSCF practices that were communicated, or offered, directly to SME firms by their banks, TSCF practices were expected to be made known or offered by anchor firms, particularly in the UK:

ES5-1 (Chairman, UK Recruitment Service Firm): "it's down to the customer [anchor firm] to let people know that they have such a thing."

> ES4 (Operations Director, UK Manufacturer): "To me it's all about information and communication. If you've got the information and people are talking to you about it then it's an option. Now a lot of these big companies have supply chain managers as well and I would expect them to talk to you about it as well. We've got this new initiative are you interested? This is the benefits, how about you try it on the next project, be a bit proactive about it to bring it forward."

A UK Manufacturer (ES8) who recently had expanded the business to international markets was exposed to TSCF practices through offers from international customers:

> ES8 (Managing Director, UK Manufacturer): "Never in the UK but many of our international customers or several of our international customers have asked me would I factor; would I give them additional discount for them paying early…Yeah several, Germany several times, mainly European customers I think."

A UK Bank (EB1) also agreed that the responsibility for raising awareness of TSCF was with the anchor firm:

> EB1-1 (Relationship Manager 1, UK Bank 1): "original point around awareness and education. So, which a bank wouldn't overly get involved in at all I wouldn't have thought, conversation around supply chain finance is with these, so it's for these guys [anchor firms] to then tell their [supplier] we have this available."

5.5.3 Impediments to Awareness

Several impediments to awareness emerged from the data, coming under the headings of Divisionalisation, Non-ubiquity, and Client Confidentiality. First of all, Divisionalisation of large banks may have played a part in the hindrance of awareness. DSCF and TSCF came under

the responsibility of two different divisions in at least one UK bank: an SME Division and Corporate Division, respectively. Potential participating SME firms would be customers of the SME Division, while the anchor firm would initiate an RF arrangement with the Corporate Division of the same bank. Bank managers who deal with SME firms appeared to only offer DSCF practices and abstained from talking about the available TSCF practice. The following quotes from EB1 illustrate this:

> EB1-2 (Relationship Manager 2, UK Bank 1): "Yeah, there is criteria behind the [RF] solution. So, typically, we're looking at very large corporate clients. So corporate clients that are turning over roughly 100 million plus which will be in the large corporate space."

> EB1-2 (Relationship Manager 2, UK Bank 1): "My previous role before I came into this role in October I worked for […] so you may be aware the banks had to legally split into two entities, so we had the split the retail bank from the investment bank. So [...] look after the personal clients and the business banking clients who turnover up to 6.5 million. And I worked for [....] previously and I talked to customers turning over below 6.5 around international trade and cash management requirements as well. So, I've also talked to a lot of the SME clients for [....] And then came into this role in October, so I now work for [....] who look after the corporate client's turnover more than 6.5 million and the investment bank."

Divisionalisation may inhibit knowledge about TSCF as bankers who do not work in the Corporate Division may not fully understand it:

> EB2 (Relationship Manager, UK Bank 2): "I've not come across supply chain finance particularly myself. I am aware that we do it, but it is mainly at a corporate level…we don't tend to deal with it in the commercial remit."

EB2 (Relationship Manager, UK Bank 2): "I really struggled to find anything for you on the supplier chain finance because I rather suspect that we don't, especially in the commercial world come across it very often."

Despite knowing that TSCF was on offer to a corporate customer, and may be appropriate for SME firms, an SME Division of a UK bank was keen to sell their own DSCF solutions:

EB1-1 (Relationship Manager 1, UK Bank 1): "Yeah I think we'd perhaps just float it as a solution but we wouldn't directly get involved in, a conversation for example might be if you're dealing with [an anchor firm] we know as a bank they have supply chain finance, so go and ask them about it. We wouldn't have that conversation…But generically we can talk about it. But I think there's work to be done in truth on that. So, I think you've probably stumbled onto a point which is very valid, especially when we know that our customers are dealing with some of the bigger, even some of those on here. So yeah, I think that's a good point. And its educating us as bank managers to talk as a solution, because we only really talk about solutions that we offer and maybe not more generic."

EB1-1 (Relationship Manager 1, UK Bank 1): "Yeah but equally I think there are probably other options that we might be able to help with on an individual company basis rather than go via the buyer."

It is worth noting that apart from divisionalisation hindering awareness, TSCF is Non-ubiquitous — i.e. not all banks offered it, especially the small banks:

ES10 (Managing Director, UK Financial Service Firm): "not all banks work with supply chain finance so that could be a limiting factor."

Small banks may only be involved in TSCF offers through syndicated arrangements:

> EB4 (Relationship Manager, UK Bank 4): "my involvement with that is negligible because the way the facilities we've structured for them. So again, I know they have but as far as what they, how it works for them really, I've never really had to be involved to be honest because we're in a, in this particular Plc we're in a syndicated deal anyhow with three/four other banks anyhow."

Also, the issue of Client Confidentiality hindered raising the awareness of other firms that use TSCF. In other words, banks could not simply tell SME suppliers about another customer (i.e. an anchor firm) that had a TSCF programme:

> EB1-1 (Relationship Manager 1, UK Bank 1): "We would ask more generic have you talked to […] about supply chain finance. Is it available? And if it is would that be beneficial for you. So, we wouldn't have a long list of who our customers are that offer because that would be breaking some confidentiality between us and our customers."

5.5.4 Awareness as Signalling

Signalling was perhaps the most important issue in relation to awareness: awareness was not just explicit knowledge about SCF mechanisms but also involved signals about the nature and status of other firms involved in an SCF scheme**.** Two main concerns about signalling were identified from the data: 1) deliberately deceptive signalling and 2) inadvertent signalling of vulnerability. Deceptive Signalling involved the perception by SME firms of the way anchor firms raised awareness about TSCF. Comments from a UK Manufacturer (ES4) and Recruitment Service Firm (ES5) show that, although the anchor firm presented TSCF as a way

for SME suppliers to gain access to early payments, forcing payment term extensions as a quid pro quo signalled otherwise:

> ES4 (Operations Director, UK Manufacturer): "They actually asked us for 90 and we said no. But yeah, I think it's because of their own payment terms. I imagine it gets them money at the end of the day, it's a way of making them some extra money, not offering credit."

> ES5-2 (Operations Director, UK Recruitment Service Firm): "So it was done at the same time as extending payment terms. And I'm sure it was done at the time, obviously it was done at the time to improve the cash reserves of the clients that we were putting into place because obviously it improved their cash flow. But obviously it wasn't sold like that it was sold to say you can draw down the money straight away and have access to it."

Besides, not communicating about TSCF at the early stages of a negotiation could make SME firms feel suspicious:

> ES4 (Operation Director, UK Manufacturer): "It would be ok if at the start of the project we said this is how we're going to finance the project and we agreed with them to use that and talked about what the benefits are and why we were going to do it and everything up front. As long as its upfront and before the project then its ok. But if it's during the project then it looks, it gives the perception that something's gone wrong I think if you hadn't planned on using it but now you plan on using it."

Vulnerability Signalling involved SME firms' concern regarding the use of a specific DSCF practice (factoring) as signalling their financial distress, or weak position to their customers:

> ES7 (Director, UK Manufacturer): *"*Historically I'm of a generation where you always thought that factoring was something that businesses did as a last resort and therefore it indicated to the customer that you were struggling financially.*"*

> ES7 (Director, UK Manufacturer): "I remember talking, my father was in business and talking to him about factoring and he was like oh no no no, that's the last step before somebody goes out of business. You know its, and I suppose I've just always had that in my head that it gives the wrong impression."

Even banks seemed to agree with the issue of signalling concerns of factoring among SME firms as expressed by a UK bank (EB3) below. This was the reason why another DSCF relationship, invoice discounting, which is a confidential form of factoring, gained its popularity among UK SME firms. More detail about confidentiality and invoice discounting will be discussed under the main category Control.

> EB3 (Relationship Manager, UK Bank 3): "one of the things that companies essentially are uncomfortable with sometimes is that their customers know that they're funding the invoices."

Another UK bank (EB2) seemed to disagree, and believed that it was a 'traditional' or 'historical' view that the use of financing demonstrates weakness:

> EB2 (Relationship Manager, UK Bank 2): And it also has a bit of a, I think historically it was always seen by some of the older customers that if somebody's factoring it's because they're struggling, that's not the case. And the reason they thought they were struggling is because obviously the debt is sold factor company. So, people see it as an admission that you're having cash flow problems…*"*

Apart from factoring, which is a DSCF arrangement, RF, a TSCF practice was also perceived as signalling vulnerability. A UK Manufacturer (ES4) pointed out issues of signalling as one of the reasons why the firm declined to participate in RF offered by its buyer:

> ES4 (Operations Director, UK Manufacturer): "But the other thing is sometimes we feel that if we use that service would we be looked at by that company as if we're struggling for money and that's not an image that we want to give that company either. So, if they suddenly see that we're drawing down money early they think oh this company is in trouble because they have to pull their money. Whereas if you don't do that it gives an image of a very strong company that doesn't need to."

> ES4 (Operations Director, UK Manufacturer): "And again, we were worried about how they would look at us as a company because if they, I'd rather work on that with a bank and the customer not see that. That's not something that you want to show the customer that you're using financing. But that's my personal feeling on it."

The banks' perception of SME's signalling concerns was similar:

> EB1-1 (Relationship Manager 1, UK Bank 1): "I think it's probably, if you were a company going to Tesco wanting to sell to Tesco would it be a perception of you be a weaker company if you were asking them for [TSCF]."

It is interesting the way in which a UK Recruitment Service Firm ES5 withdrew money for only the extended term, which was beyond 45 days, instead of withdrawing as soon as available. This was possibly the way this it avoided signalling weakness, as well as intentionally Signalling Credibility:

ES5-3 (Finance Manager, UK Recruitment Service Firm): "what would happen is we would upload our invoices and as soon as they were uploaded and approved by [the anchor firm] we could call that money down at any point after that day. So, in the eyes of [the anchor firm's bank] that might be 90 days in advance of the maturity date because that was what they'd set up with [the anchor firm] but our term was still 45 days. But we did agree that we would call it down on the 45 days."

5.5.5 Awareness in terms of Transparency

Transparency in transactional relationships gives the involved parties the ability to control and minimise risk and so is an important aspect of awareness within those relationships. For instance, banks stated their preference for DSCF practices such as invoice discounting, due to it being a transparent transaction and 'A Nice Audit Trail':

EB2 (Relationship Manager, UK Bank 2): "It's like on the invoice discounting side of things invoice discounting works and we quite like invoice discounting if, if I've made that cup and I deliver it to you you give me, I raise an invoice on delivery, there's a nice audit trail. You can see it being produced, you've signed to accept delivery, we've raised an invoice against that, it works really well".

ES11 (CEO, UK Wholesale Firm): "I certainly would be an advocate of having more than one account because if you've got invoice discounting it makes no difference the bank knows exactly what you're doing, they can see every invoice, every payment and they get that daily."

ES11 (CEO, UK Wholesale Firm): "If you go and talk to a bank and say I want some finance 90% of banks will actually suggest invoice discounting because it's very clean, it's very transparent, they get a day to day measure on what's going on because you have to send the invoices. So, if you think about an overdraft you could have a £650,000 overdraft, the bank

> doesn't know what you're invoicing and what you're collecting in money because you're not reporting daily. So, the banks would prefer you to have invoice discounting because its more intrusive and they've got more information on you and they have it daily. It's like big brother, conspiracy theory, they know more about your business and how its trending. So, I think invoice discounting is good, but it has dangerous limitations."

The following quote shows a clear link between transparency and risk, again demonstrating how intimate the connections are between categories; this is discussed further in Section 5.8:

> ES17 (Managing Director, UK IT Service Firm): "And from a risk point of view I think they would probably argue that they obviously, they want to have oversight of the full set of money that's going through the account and there's also money laundering which might come into it as well."

Another example in which transparency helped mitigate risk comes from A UK Manufacturer (ES6) whose factoring was provided as an additional service by its logistics service provider (LSP) instead of a bank. This UK Manufacturer enjoyed relatively inexpensive financing, despite it being a small and not well-established firm. This was achieved because the LSP worked as a back office for ES6 covering both order processing and payment collection tasks, and thus had a lower risk in providing factoring compared to a bank.

> ES6 (Founder, UK Manufacturer): "Well the thing is it all goes, the way that we do our back office the company that provide our factoring service is the company that people pay on our behalf anyway. So, when [a retailer] buy our stock they don't buy it from [us] they buy it from the other company, the back-office company, they are effectively our supplier. So [the retailer] will pay this company after say 60 days, so that makes no difference."

Banks also need transparency when providing DSCF, as described by both a UK Wholesale Firm and a UK bank:

> ES11 (CEO, UK Wholesale Firm): "The first thing they do is if you want an invoice discounting facility, let's say you're currently with [Bank A], and I wanted an invoice discounting with [Bank B]…As soon as you want a facility they want to have your normal bank account because then they have the transparency to see what your business is doing."

> EB3 (Relationship Manager, UK Bank 3): "It really depends on the complexities of each fund. The customer might have invoice finance, but they might also have loans. So, they could have a business loan for their commercial property. They could have a trade loan. They could have a supplier payments facility; they could have an overdraft. So, all of those things you would generally take over in one go. It's very rare that an institution will lend money to someone when they've got the invoice finance book at another institution."

In TSCF relationships, transparency of transactions can be gained through collaboration with the anchor firm, i.e. the approval of invoices by the anchor firm as indicated below by the Finance Manager of a UK Recruitment Service Firm (ES5). Similarly, for variants of TSCF in Thailand, the anchor firm provided the required information in relation to the SME firms and transactions to the bank as listed earlier in Table 5-4.

> ES5-3 (Finance Manager, UK Recruitment Service Firm): "what would happen is we would upload our invoices and as soon as they were uploaded and approved by [the anchor firm] we could call that money down at any point after that day."

Another issue of transparency is related to the impression of the complexity of TSCF mechanisms. Unlike DSCF, which involves a price negotiation between an SME firm and its

bank, the price of TSCF is determined by what is going on between the anchor firm and its bank, as well as the negotiation between the anchor firm and SME firms. This raises Issues of Price Discrimination since SME firms' TSCF are individually priced. In particular, it is not clear how the set-up costs of RF are allocated. Some anchor firms clearly charge a separate set-up fee, as described by a UK Manufacturer (ES4), whereas some anchor firms seemed to include it in an ambiguous discount rate, as explained by the Finance Manager of a UK Recruitment Service Firm (ES5-3):

> EB1-1 (Relationship Manager 1, UK Bank 1): "if [the anchor firm] come to EB1 and say we'd like [RF] then we're not overly interested in [the anchor firm] 's customer [supplier], we're interested in [the anchor firm]. And [the anchor firm] can price their funding too, they become the bank effectively don't they under this type of scenario."

> EB1-1 (Relationship Manager 1, UK Bank 1) "it's fascinating really because I think one of the perceptions is that it's not out there, so if you go to [anchor firm] at the moment they will individually price. They might have to individually set a contract with milestones to release money to their own [suppliers]."

> ES4 (Operations Director, UK Manufacturer): "…there was a set-up fee I think, and I think it was about 1% of the project. It wasn't that much in percentage, but it was a big contract, so it worked out a lot of money."

> ES5-3 (Finance Manager, UK Recruitment Service Firm): "So these are obviously the discount rates for the supply chain finance and obviously it's LIBOR plus 1.5% dependant on the maturity date of the invoices."

So, unless the anchor firm was willing to absorb some, or all of the cost of initiating RF, SME firms inevitably ended up paying for all related costs, including a discount charge. As a result, the arrangement may not be cheaper than their existing DSCF. The following comments from two UK banks illustrate the extra, perhaps less explicit, costs, that the non-anchor firm bears in a TSCF arrangement:

> EB1-1(Relationship Manager 1, UK Bank 1): "there'll be an element within that pricing that is our profit and equally is there an element that our customer could then pass on to their end user to absorb…They can then pass on the funding to their [supplier] customer. So hopefully it's a positive for everybody in the chain so to speak if that's the way to do it."

> EB3 (Relationship Manager, UK Bank 3): "it's usually a percentage of the invoice and it's the supplier that pays to use it. So, whilst our customer, our recourse is to our customer, our customer doesn't pay the actual charges, the supplier pays it."

Another interesting point regarding price transparency is that the anchor firm may not know about the SME firms' financing cost, thereby Over-pricing an offer of TSCF. This can be seen in the case of a UK Recruitment Service Firm (ES5) where it turned out that the price of TSCF was more expensive than the existing DSCF. ES5 and most SME firms would keep the use of their DSCF secret, and ES5's anchor firm had no idea that ES5 had been using invoice discounting. Also, the anchor firm seemed to have underestimated ES5's credit rating and came up with a higher TSCF price than DSCF.

Overall, awareness was a significant category of factors in informants' constructions of SCF, but this was not simply about awareness of the mechanisms of SCF. It was as much awareness of what the other parties were up to, which was often a bigger issue in triadic arrangements

where SMEs received finance from supply chain partner's banks. And in triadic arrangements, in particular, it was harder for SMEs to avoid inadvertently making supply chain partners aware of potential financial weakness

5.6 Main Category 4: Control

Issues of control came under four sub-categories, covering concerns about being manipulated, managing complexity, preserving flexibility, and maintaining confidentiality. Figure 5-6 shows the four sub-categories and their associated Concepts.

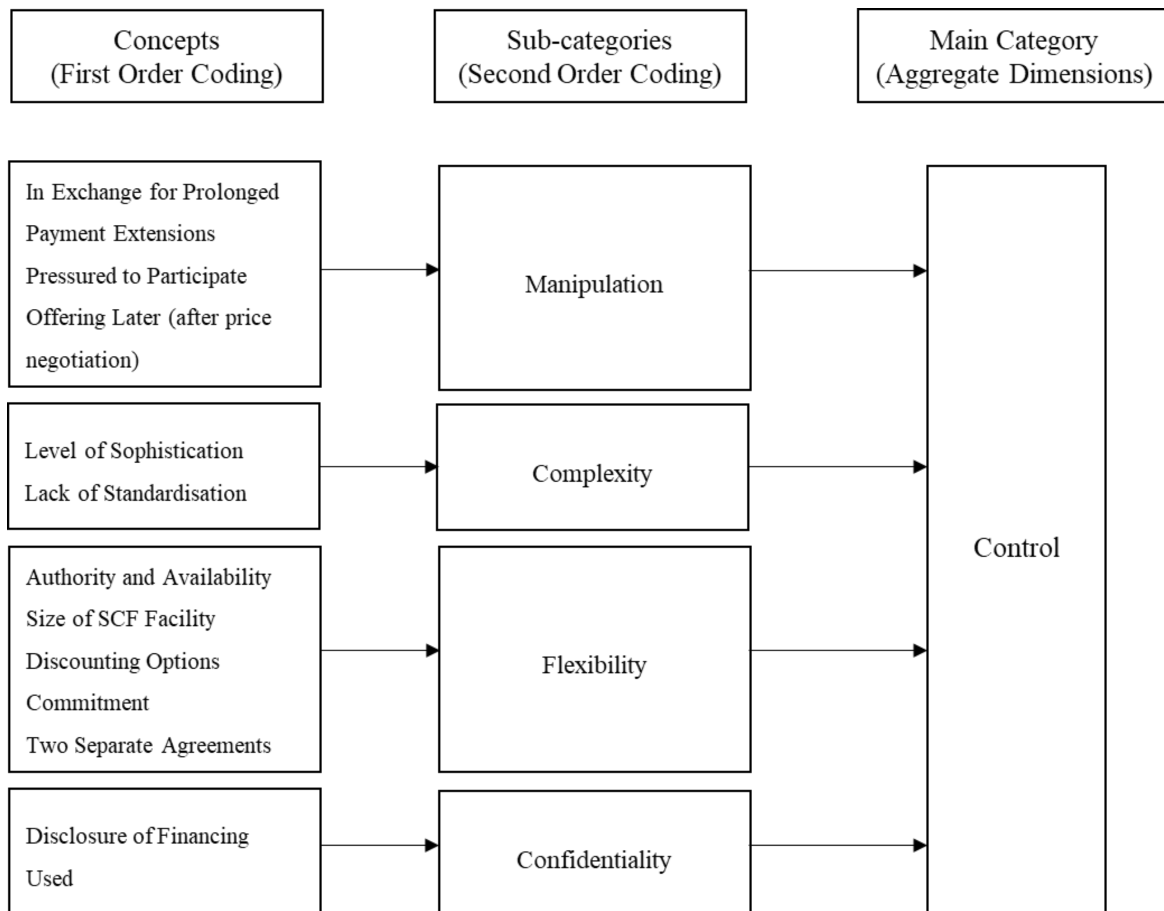

Figure 5-6 Concepts and four Sub-categories for Main Category: Control

5.6.1 Manipulation

Being manipulated emerged as a concern in SCF adoption, especially during the DSCF-TSCF transition. For example, RF was typically offered in Exchange for Prolonged Payment Extensions, so SME firms felt manipulated into accepting delayed payments. This is evident for a Swiss Manufacturer (ES2) and a UK Recruitment Service Firm (ES5) whose payment terms were extended considerably, i.e. from 45 to 112 days, and 30 to 120 days, respectively:

> ES2 (Director, Swiss Manufacturer): "we go for around 45 days payment by the customer…One of our big clients has 112-day payment terms to us and <u>this is where we've gone into arranging</u> … <u>reverse factoring</u>…<u>Because we cannot, we are too small to be able to fund 112 days payment term.</u>"

> ES5-1 (Chairman, UK Recruitment Service Firm): "the reason it came about first of all is <u>we were on the 30-day payment terms with them and they wanted to stretch it to 120 days</u>."

Manipulation was sometimes seen as being related to a particular industry, specifically the notorious construction sector, as described by a Finance Manager of a UK Recruitment Service Firm (ES5), who had previously worked in the sector:

> ES5-3 (Finance Manager, UK Recruitment Service Firm): "So I came from a construction background where they didn't have anything like this and where cash flow was absolutely diabolical and <u>you did use your suppliers for your cash flow and it was murderous, it was awful</u>."

This UK Recruitment Service Firm (ES5) felt Pressured to Participate in the TSCF offered by its customers:

ES5-1 (Chairman, UK Recruitment Service Firm): "Yeah I'm not sure how difficult they would have made it if we didn't do it because they really were pushing it. Because obviously it made a big difference for them moving to 120-day payment terms than 30 payment terms, but they never said you have to do it. But they were putting a lot of pressure on to do it."

ES5-2 (Operations Director, UK Recruitment Service Firm): "We didn't do it willingly".

A similar point was made by one of the expert UK informants for Supply Chain Finance:

EE1 (Expert, UK Supply Chain Finance): "Well quite often the big company says you have to do this. So, then they do it. But they do it more because they have to do it rather than because there's an opportunity for them."

EE1 (Expert, UK Supply Chain Finance): "if a big company forces you to use the supply chain finance programme and you're an SME then you might be quite upset if they're forcing you to use an expensive way of getting, of financing extended payment terms which the big company might want to extend its payment terms from 30 to 60 to 90 days and says we can do that but here you can have this supply chain finance programme to reduce the cost to you of late payment. But it's very expensive and the external challenge is that it's expensive but also, you're being forced to do something which is not in your interest."

SME firms may also feel forced to use a TSCF platform even though they do not sell invoices:

EE1 (Expert, UK Supply Chain Finance): "some big companies will say even if you don't want to use the factoring element [RF] you still have to go onto the platform to get your, to lodge your invoices and to get all your payments even if they're just traditional payments. So, there's two different levels of being forced to use it."

Offering TSCF Contracts Later in trade negotiations made SME firms feel they were being manipulated because they were not able to include the associated expenses in the negotiated price. This resulted in two SME firms, both UK Manufacturers (ES4 and ES8), declining offers to join TSCF arrangements:

> ES4 (Operations Director, UK Manufacturer):"as long as I know the cost of that so I can factor it into our project then it would be something that we look at and we do. But I don't like doing it after the order, the contract's been placed because we're losing money and I don't like doing anything that wasn't sort of pre discussed. I'd like to do it as a last resort."

> ES8 (Managing Director, UK Manufacturer): "so, they get 40% and now they're asking for 42% if they pay us early. And I'm like well you may pay us early, but I'll make no money on the product."

5.6.2 Complexity

The first aspect of complexity in relation to Control was whether the potential participating SME firms had the required Level of Sophistication, a concept in Figure 5-6 that captured the degree to which a firm could cope with the perceived complexity of a TSCF arrangement. A mismatch in terms of sophistication and level of complexity had a potential to hinder the decision to participate in the arrangement:

> EB1-1 (Relationship Manager 1, UK Bank 1): "And I have customers that don't use sales finance because they're not sophisticated enough to use it. They shy away because they're nervous about using the system, which might be the same as, you might find with utilising the supply chain finance."

> EB3 (Relationship Manager, UK Bank 3): "They may not understand it. Because there's usually an online system that they have to, the supplier has to agree to their side to be able to upload and get the invoices agreed. So, it could be that they're reluctant to do that."

Another informant, an expert in Supply Chain Finance, similarly thought TSCF arrangements were perceived as more complex:

> EE1 (Expert, UK Supply Chain Finance): "Well I think the, particularly for SMEs the biggest challenge is quite complicated both in managing the process but also in the systems, whether you've got a platform that you have to sign into and connect to so all your invoices are and all your purchase orders are there. So, there's some, it's quite complicated and its quite technically complicated as well. And therefore, for a lot of small companies they just don't see its worthwhile for what's not a big benefit."

The UK Manufacturer (ES4), who in the end declined to participate in an TSCF arrangement, explained his perception of the complex process of joining:

> ES4 (Operations Director, UK Manufacturer): "we had to set up a lot of paperwork and talk to the bank and they had to approve it and by the time we went through it it was probably 60 days anyway, so we were getting our money."

Nonetheless, some SME firms found the process of adopting DSCF complex as well, so complexity does not always differentiate between dyadic and triadic arrangements. The following quote from a Senior Partner in a UK Construction Consultancy Firm refers to the complexity of invoice discounting:

ES19 (Senior Partner, UK Construction Consultancy Firm): "And also there's a lot of admin involved in applying for these things and they want to do credit checks and maybe they want security. So, you know if you borrow money off financial institutions you might have to signed personal guarantees and all these things and we don't need any of that. So, it's a lot simpler just dealing with things ourselves and then we don't need any external organisations, we don't need to fill out any paperwork. We don't need to ask for any permissions. We don't need to pay interest. So, it just cuts out a whole lot of admin as well".

In order to be eligible for invoice discounting instead of factoring, SME firms need to have a robust credit control and collection process in place. In other words, invoice discounting is typically used by medium-sized firms rather than small-sized firms, as explained by the CEO of a UK Wholesale Firm (ES11) and the Relationship Manager of a UK Bank:

ES11 (CEO, UK Wholesale Firm): "Factoring is, factoring is normally used for a smaller business or a start-up business because they haven't got the systems and the discipline to actually run invoice discounting. And invoice discounting can be more prone to abuse."

EB3 (Relationship Manager, UK Bank 3): "So with invoice finance we would always expect the company to have a good collections team in the company, so they've got someone who's responsible for collecting the invoices when they become due. Usually they've got a good audit process internally. So that's what we assess."

The level of sophistication of SME firms clearly determined the choice among DSCF practices, particularly between invoice discounting and factoring. For invoice discounting, the supplier performs the credit control and the collection of payments. For factoring, these processes are handed over to the factor or bank. As the CEO of a UK Wholesale Firm (ES11) indicated, a supplier without the capacity for these processes should, therefore, use factoring. Even though

this issue does not seem to explicitly draw a line between dyadic and triadic arrangements, it implied that firms with an existing invoice discounting arrangement had a level of sophistication enabling participation in TSCF, while firms that used factoring could find it difficult to use the TSCF platform:

> EB3 (Relationship Manager, UK Bank 3): "I mean the customer would always state a preference, but I really depends on what the infrastructure of that company is and what our risk is. So usually a bigger company that has got a good audit process, good accounts, accounts department those would usually qualify for invoice finance because we know they're going to collect the debts on time."

The size of the firm matters, not only for determining between the two DSF options, invoice discounting and factoring, but also for accessing these options. Medium-sized firms have access to invoice discounting which can be a better option than RF, while smaller firms only have access to factoring, so RF is a better option. However, RF is often offered to significant, medium-sized SME firms rather than small, insignificant ones, because they are more important to the anchor firm. This means that there is a mismatch of complexity, i.e. RF is offered to bigger sized suppliers who may already have access to cheaper form of DSCF, while smaller firms using the more expensive form of DSCF are not included in RF programmes.

The size of the firm influences its level of sophistication, and its ability to deal with complexity, in obvious ways. So, for example, size can determine whether the firm has the specialised staff and technology to deal with TSCF arrangements:

> EE1 (Expert, UK Supply Chain Finance): "I think for a small company that's the biggest challenge is its complicated and small companies tend not to have many people who can focus

on things, smaller companies people have to do everything and they have many different roles and therefore they can't spend time getting to understand the supply chain finance programme and the technology for not many transactions. Whereas in a big company that has lots of transactions then you have specialist, you can afford to have specialist people who look at the invoicing and payment."

EE2 (Expert, UK Public Procurement): "it depends on the type of supplier because obviously there's investment and resource required at the supplier's side…Because they have to have that technology to be able to do it at their end and it needs to be able to work with their finance systems and their accounts systems. So, it's a bit of investment required."

The size of the firm similarly matters if the firm has coped with the complexity of participation in a TSCF arrangement where they need to use two systems at once. This would be especially true if they had existing DSCF mechanisms, e.g. invoice discounting, that utilised a system similar to the one needed for TSCF arrangements, as described by the Chairman of a UK Recruitment Service Firm (ES5) who also thought (in contrast to other informants) that the systems in any case were simple:

ES5-1 (Chairman, UK Recruitment Service Firm): "it creates more work for us as well because the two systems…It did create a little bit more work but no we managed to absorb that into current teams. The system was very simple to use and obviously we're already using an invoice discounting system which is very similar"

However, according to an expert in UK Supply Chain Finance (EE1), SME firms may need to deal with more complex systems. The key point about triadic systems is that, because the finance provider is the buyer's client, the supplier is likely to have to deal with a different system for each of its customers:

> EE1 (Expert, UK Supply Chain Finance): "One of the other issues, internal issues that companies face is that they, if they provide goods and services to multiple customers each of their customers might have a different supply chain finance programme and a different supply chain finance platform. And therefore, an SME would have to link into a number of different programmes, all of which have different rules and terms and conditions and so forth, and different technologies with different integration and implementation issues. So, for a small company to have to link to many many supply chain finance programmes, one for each one of its."

This is related to the issue of standardisation. Participation in TSCF may result in SME firms having to use two systems at the same time due to a Lack of Standardisation, and this is a clear difference from DSCF:

> ES5-1 (Chairman, UK Recruitment Service Firm): "Yeah there were two systems. So, with their invoices we had to, yeah if we were drawing down the money we had to use [the anchor firm's bank]'s own portal in order to do that and obviously we have our own system with our bank."

The solution would have to be some kind of standardisation, as suggested by the UK Supply Chain Finance expert (EE1):

> "you would like it to be standard so that many customers, many big companies are using the same platform and the same tools so that the SME doesn't have to link to many many different supply chain finance programmes."

However, EE1 also believed having a standardised system may not be straightforward:

"And I think last thing about standardisation because I think this is a very important one that maybe supplies have to deal with multiple reverse factoring platforms. How the standardisation can happen because different big company use different and I don't think they can cooperate with other big company to have that platform standardised."

The following quote by a Relationship Manager of a UK Bank (EB3) confirms this Lack of Standardisation:

"Yeah so there's a system, so for our institution it has an online system. Most of the institutions have their own online system where they will, the customer themselves load the invoices in the system and draw it down, the funds that they need on a daily basis. So yeah, it's an internal system that each bank has its own system and each bank will load its own system in there".

5.6.3 Flexibility

Flexibility emerged quite clearly as an aspect of control that was relevant to informants. DSCF arrangements, such as invoice discounting, were seen as being flexible regarding Authority and Availability. This is due to the choice over amounts withdrawn and the immediate availability of monies without the need for approval from the anchor firm:

ES5-3 (Finance Manager, UK Recruitment Service Firm): "we put schedules on. We could do our schedules on a daily basis, weekly basis, monthly basis…And then you can draw down on that as soon as it's been accepted at this 2.5% rate. You can do that as and when you need it. You can do the whole facility in one you can do it 200 grand a day you can do it whatever you want, however you need it for your cash flow."

EB2 (Relationship Manager, UK Bank 2): "if you have a business that is expanding and growing then invoice discounting, assuming that it meets all the criteria of invoice discounting, is probably the most flexible and cost-effective way of doing it."

Unlike RF, where SME firms need to wait for approval of the invoice from the anchor firm prior to the request for early payment, monies were available virtually immediately in DSCF arrangements. The following two quotes by the Finance Manager of a UK Recruitment Service Firm (ES5) illustrate the onset (lead time) of DSCF and TSCF, respectively:

ES5-3 (Finance Manager, UK Recruitment Service Firm): "But yeah we can submit, for instance I have requested funds [i.e. DSCF] this morning, where is it, payment requests. I requested this £150,000 this morning at 8.55, it was in our account by 9.15. So, it is quite instantaneous."

ES5-3 (Finance Manager, UK Recruitment Service Firm): "what would happen is we would upload our invoices and as soon as they were uploaded and approved by [the anchor firm] we could call that money down [i.e. TSCF] at any point after that day.

In addition, DSCF adopters can directly negotiate with their bank to increase the facility size when needed. This flexibility, however, is not possible in a TSCF relationship where the Size of the SCF Facility is determined by the anchor firm and its bank:

ES5-3 (Finance Manager, UK Recruitment Service Firm): "we use [Bank B] and they're really good they will speak to us; they want to work with us. In the last 15 months we've increased our facility twice, we went from 900,000 limit to 1.5 million limit to 3 million limit and every time they've worked with us and they've managed to get it up but they're really good."

RF as a TSCF arrangement was also found to be inflexible compared to DSCF arrangements in terms of the withdrawal amount. This is an interesting and significant finding; the literature seems to favour the 100% drawdown of RF but, in reality, SME firms disapproved of the necessity of drawing down 100%, as commented on by the Chairman of a UK Recruitment Service Firm (ES5):

> ES5-1 (Chairman, UK Recruitment Service Firm): "The problem, actually one of the issues we had with supply chain finance is they would only release the whole of an invoice, so we couldn't just draw down bits of money. So, with our invoice discounting facility all those invoices are put together and we know we have, let's say we've got the ability to draw down a million and a half pounds at any one time. With the supply chain finance, it was you have to draw down 100% of an invoice. So, if an invoice was £400,000 but we only needed £50,000 we'd have to talk the whole £400,000. Now I don't know if that was a system that's unusual to [Bank A] or whether that's usual but that's what we were forced to do, so that was a problem. Whereas invoice discounting we can just draw down what we want when we want."

Both DSCF and TSCF arrangements are similar in that they offer two Discounting Options. The main difference is that DSCF has the option of selling either all the customers' invoices, i.e. the whole turnover, or selling selected customers' invoices, as explained by the Director of a UK Manufacturer (ES7). On the other hand, TSCF has options for discounting either all of the anchor firm's invoices, i.e. auto discounting, or discounting the anchor's firm invoices only when needed, i.e. selective discounting, as described by a UK Supply Chain Finance Expert (EE1):

> ES7 (Director, UK Manufacturer): "I've spoken to our bank recently and there's a, what they do it's a bit like the factoring where they will extend, but it's a fixed sum of money against

our debtors' book. But it's not done per invoice its, so for instance I would cherry pick maybe a dozen good customers and they would look at how much they buy from us over 12 months. And then they would extend us credit based on those customers and knowing that, and those customers would pay into that pot, that account. So, they would have to have a separate account to do that. But we would always have this pot of money then to draw upon. But it's very like an overdraft in that sense."

EE1 (Expert, UK Supply Chain Finance): "well there's two ways of say saying no, one is you say no I'm not going to go onto the platform at all, I'm not going to engage with supply chain finance all, full stop. And the other is that you join the programme but then you only use it for certain transactions, not for everything."

EE1 (Expert, UK Supply Chain Finance): "you can choose if you want to factor, reverse factor a particular transaction, so you can decide not to take early payment, or you can decide to take early payment on some transactions and not others. So that's one thing."

Despite selective invoice discounting costing more than the conventional ones, owing to higher risk, the Director of a UK Manufacturer (ES7) was considering using a selective invoice discounting mechanism due to its flexibility:

ES7 (Director, UK Manufacturer): "I quite like the idea that you can cherry pick certain customers and it doesn't have to be everybody."

More importantly, the selective DSCF option (selective invoice discounting) also helped to ease confidentiality concerns since it was possible to choose which customers to be included, as described below:

> ES7 (Director, UK Manufacturer): " I think what they're trying to do is they're trying to look at ways that, for people like me who wouldn't want to go down that route, look at ways in which you might, but not for all of your books, so for all of your customers. So, you know if there was somebody that you didn't want to know that you were looking at factoring you wouldn't choose them to be one of the ones that you cherry pick, you'd look at others instead. So, I think they're trying to offset that stigma a little bit."

Additionally, the following quote from a bank not only shows flexibility as an aspect of control, but also displays a clear link between the Control (i.e. flexibility) and Risk Categories. It suggests that increasing one party's flexibility can only be achieved by increasing another party's risk:

> EB2 (Relationship Manager, UK Bank 2): "Whereas a traditional overdraft there's little less control from the bank's side because you're raising the invoices, we don't see the invoices, the money coming back in until it appears on the account. So, we don't know what invoices you've raised, so there's a lot more flexibility on your side, but there's a lot more risk on the bank's side."

One of the important features of SCF related to flexibility that needed to be taken into consideration was Commitment, i.e. whether the SCF is a committed or non-committed credit facility. Committed SCF relationships last for a certain period and characterise DSCF practices, whereas non-committed contracts are similar to overdrafts which are provided on demand and can be stopped or taken away at any time. A Relationship Manager at a UK Bank (EB4) explained how uncommitted facilities like overdrafts work:

EB4 (Relationship Manager, UK Bank 4): "So products to a typical sort of trading business would be an overdraft, so what we call an evergreen facility where, and on something that has facilities that is on demand where we can provide it and take it away straight away if we wanted to if there was ever a problem.

TSCF arrangements always appear to be uncommitted relationships in the form of having two separate agreements that either the anchor firm or the bank can terminate with immediate effect on the SME firm, thus offering these two parties considerable flexibility. This can be seen from a Supplier Finance Facility Agreement between a UK Recruitment Service Firm (ES5) and the anchor firm's bank, that illustrates the uncommitted nature of TSCF according to three possible ways of termination: 1) the anchor firm terminates the Client Agreement (i.e. the agreement between the anchor firm and the bank); 2) the bank (or SME firm) terminates the Supplier Agreement (i.e. an agreement between the SME firm and the bank); and 3) the bank terminates the Client Agreement.

DES5-1 (Supporting Document 1 to Chairman of a UK Recruitment Service Firm): "This Agreement will terminate automatically if the Client [anchor firm] and /or the Parent (if applicable) ceases to be a party to the Client Agreement or upon the termination of the Client Agreement, as applicable, and We [anchor firm's bank] undertake to notify You [SME firm] of any such cessation of termination."

DES5-1 (Supporting Document 1 to Chairman of a UK Recruitment Service Firm): "Unless terminated previously in accordance with Condition 9.1 [the above quote], either Party [bank or SME firm] may at any time, by giving written notice to the other Party, terminate this Agreement with immediate effect."

> DES5-1 (Supporting Document 1 to Chairman of a UK Recruitment Service Firm): In addition, We [anchor firm's bank] have the right to terminate the Client Agreement with immediate effect upon the occurrence of certain events specified in the Client Agreement. In the event that We exercise the right to terminate the Client Agreement in such manner, We will notify you forthwith and You agree that from the date of such notification, We shall have the right to cease making payments to You in respect of any and all notified Receivables, including any Notified Receivables Under Notified Invoices which were included in an Invoice Notification prior to the date of such notification to You. We shall not be liable for any Losses incurred by You as a result of Us ceasing to make payments in such circumstances."

It is worth pointing out that in the Carillion scandal the bank terminated part of the Client Agreement involving the auto-discounting facility. This immediately affected Carillion's suppliers who participated in its TSCF programme and later on the bank terminated both discounting facilities. The quote below, in a document from a UK SME Association expert, is a letter from the bank to the Business, Energy and Industrial Strategy, and Work and Pensions Committees regarding Carillion's TSCF programme:

> DEE4 (UK SME Association's Supporting Document): "This series of events, combined with updated financial analysis provided by Carillion to the banks' advisors in the second week of December, further undermined [Bank A]'s confidence in Carillion's financial position. In light of the lack of progress with the restructuring plan, [Bank A] took the decision to terminate the auto-discounting facility as a prudent risk management measure but to keep the ad hoe discounting service available to suppliers."

Flexibility also seemed to be psychologically important as well as economically rational, with informants referring to Peace of Mind, as described by a Director of a UK Manufacturer (ES7)

and a Director of a UK Construction Consultancy Firm (ES18), where having the facility to access funds was important:

> ES7 (Director, UK Manufacturer): "I would rather pay more and have that piece of mind of knowing I've got that buffer behind me than just do it on the debtors list [selective invoice discounting] that I have at any one time from those customers. That to me feels too fluid."

> ES18 (Director, UK Construction Consultancy Firm): "We do have an overdraft facility with our bank, Bank A We don't often use it, as I say the, with having this £300,000 sinking fund we, that's almost the first port of call if there's any issue with cash flow for any reason. But in my four years we've not had to call on the overdraft once but it's there if we need it…Just in case yeah, sensible to have."

While ES7 used a non-SCF option, ES18 used internal funds for a similar reason (i.e. for peace of mind). This shows a link to Risk Appetite (Self-sustainability):

> ES18 (Director, UK Construction Consultancy Firm): "We try to be fairly proactive and we keep what's called a sinking fund within the company. So, at all times we try and have £300,000 in the sinking fund. So, what that allows you to do is still pay salaries and so on but without, you know if someone is late paying it's almost like a contingency fund just to manage those sorts of peaks and troughs of cash flow. So, we always try and keep £300,000 in the sinking fund at all times."

While the literature emphasises the economic aspect of SCF, these data show Flexibility or inflexibility as a central concern of informants. There are flexibility-certainty trade-offs in which DSCF mechanisms may be inflexible due to lock-in contracts, but at the same time give

a degree of certainty to SME firms. This can be compared to TSCF arrangements, which can be terminated by either of the other SCF actors.

5.6.4 Confidentiality

SME firms appear to be concerned with the Disclosure of Financing Used to their customers. This was evident from the findings that the most popular DSCF practice among UK respondents was invoice discounting. Its popularity, compared to factoring, is due to its confidentiality, as stated by two SME firms:

> ES11 (CEO, UK Wholesale Firm): "They are not allowed to tell, we do not, we do the chasing and we do not tell the customer that its invoice discounting, that's confidential between us and the bank. The customer gets the invoice, we chase the invoice."

> ES16 (Director, UK Professional Service Firm): "It's secret, so you manage the process, you manage your debt collections, you invoice your clients just like normal. You, yeah the client, my clients don't know that I invoice discount, they haven't got a clue."

The Director of a UK Manufacturer (ES7), who only used overdrafts facilities, also considered adopting invoice discounting due to its confidentiality:

> ES7 (Director, UK Manufacturer): "It was also that if they could, because it was done through your own bank, they could divert funds from a supplier into another account so that you're not having to tell your customer that you're using a factoring service, which is in effect what it is. So, the customer would just pay you as normal, but that money could go directly, they could always set something up so when money comes in from that customer it always goes into that account. And so, it was sort of hidden really."

Unlike invoice discounting, factoring arrangements, with its similarities to triadic arrangements, are typically disclosed to customers. Likewise, participation in TSCF arrangements means that SME firms disclose their financing needs whenever they discount the approved invoices, thereby exposing themselves to their clients:

> ES16 (Director, UK Professional Service Firm): "Because your factoring and invoice discounting, they're both the same. They're both the same but the only difference is invoice discounting is where your client doesn't know that you are invoice discounting because you manage. Its secret, so you manage the process, you manage your debt collections, you invoice your clients just like normal. You, yeah, the client, my clients don't know that I invoice discount, they haven't got a clue. Factoring on the other hand they do know. So, factoring's more expensive, its more aligned to smaller companies and the bank invoice the client, not the company. So, the bank invoice the client and the bank collect the cash in a separate account."

Similarly, an Operations Director of a UK Manufacturer (ES4) declined to participate in a TSCF offer to avoid signalling vulnerability, as previously discussed in 5.5.4 (Awareness as Signalling). In addition, ES4 further commented that if money was needed, it was better to use a DSCF option, in which dealing with the bank would be direct:

> ES4 (Operations Director, UK Manufacturer): "And again, we were worried about how they would look at us as a company because if they, I'd rather work on that with a bank and the customer not see that. That's not something that you want to show the customer that you're using financing. But that's my personal feeling on it."

In contrast, a Director of a Swiss Manufacturer (ES2) had no issue in participating in TSCF as the firm was using factoring which was already disclosed to customers. On the other hand, the Chairman of a UK Recruitment Service Firm (ES5), who participated in RF to maintain a

relationship with the customer, revealed that their use of a DSCF arrangement was unknown to the customer:

> ES5-1 (Chairman, UK Recruitment Service Firm): "we invoice discount, we've got a confidential invoice discounting facility, so it's like factoring but they don't, the clients don't know that we're factoring.".

Furthermore, as discussed in Section 5.5.4 on Awareness as Signalling, the Chairman of a UK Recruitment Service Firm (ES5) only discounted the anchor firm's invoices at a specific point (i.e. 45 days) to show that the firm did not need financing. These examples clearly show a close connection between Confidentiality and Awareness, explored further in Section 5.8 .

5.7 Main Category 5: Context

The fifth and last main category is Context and comprises three sub-categories: Nature of Business, Regionality and Legitimacy, as shown in Figure 5-7.

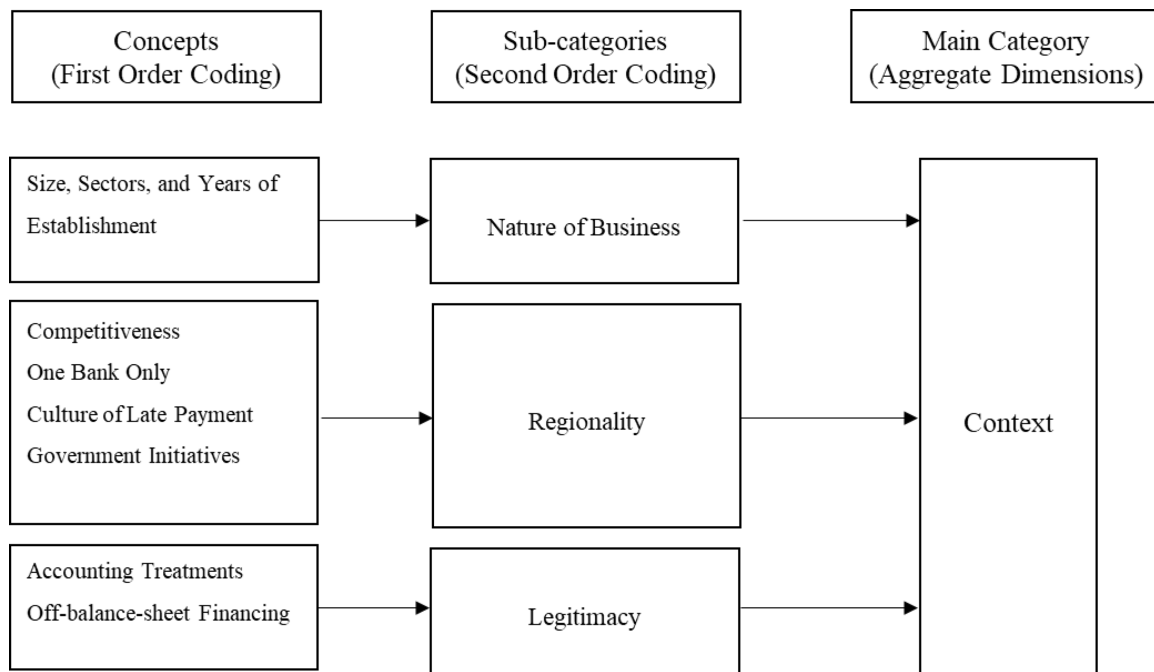

Figure 5-7 Concepts and three Sub-categories for Main Category: Context

5.7.1 Nature of business

Firm Size, Sector, and Years of Establishment affected the ways informants thought or made decisions about SCF. These findings showed that all the firms that adopted invoice discounting were established firms, covering diverse sectors, namely manufacturing (ES3), recruitment services (ES5), distributors (ES9, ES11), and facility management and services (ES16). Informants used the Size of the firm to base their decision on what type of SCF was appropriate. For example, the Chairman of a UK Recruitment Service Firm (ES5) believed that TSCF would provide better financial benefits for smaller firms:

> ES5-1 (Chairman, UK Recruitment Service Firm): "Yeah, well obviously the one [RF] that we had was slightly more expensive than our invoice discounting, <u>but I think actually for a lot of SMEs</u>, because we're probably more of a, I suppose 23 million I don't know if we're more of a medium sized SME or where we fit in but the small organisations <u>I think they would benefit from it because if they have an overdraft facility or if they have, you know if they have</u>

> a factoring then it probably will be more expensive than we pay for our factoring [invoice discounting] and therefore the supply chain finance probably is a better option for them, so whether we're unusual in our size."

Type of Sector can also be important in the way people think about SCF. Sectors with high volumes of invoices, such as recruitment agencies or business service providers, were seen as suitable for DSCF schemes such as invoice discounting. In other sectors, TSCF may work better, as suggested by the Chairman of a UK Recruitment Service Firm (E55):

> ES5-1 (Chairman, UK Recruitment Service Firm): "Certainly, in recruitment invoice discounting or factoring is very very common, just because it's quite easy to do because there's timesheets and they're signed so the banks like, and they give off a good rate for factoring for recruitment companies. I think if we worked in a manufacturing or some other industry where they don't like or another service industry where it's not quite something as clear as signed timesheets then supply chain finance could *work a* lot better for them because it will be cheaper than their current working capital finance methods."

Nonetheless, not all recruitment agencies have a high volume of invoicing, particularly if they have more permanent than contract recruitment business. The Managing Director of a UK Professional Service Firm (ES14) explained why the business did not need to adopt DSCF, although also suggesting that factoring was normal for the nature of the business. For the recruitment of permanent staff, the business get a significant one-off fee, whereas for contract staff they receive regular invoices with smaller fees. It is for the latter that recruitment agencies will use factoring to obtain working capital finance:

> ES14 (Managing Director, UK Professional Service Firm): "It's unusual you factor your permanent recruitment business, not many companies do that, sorry not many recruitment businesses will factor perm [permanent recruitment], because they're paying high interest rate for their own money which they're going to collect anyway quite quickly, within 30 days. So, they don't need to do that, but you can. I get offered it all the time, but I don't need to do it. But it's an option. What's more like the norm is factoring your contract [contract recruitment], because a contract can, you can build up really quickly."

All seven Thai SMEs that are established firms avoided using external finance due to their low profit margin businesses. Paying interest or fees would reduce their profit further, as commented on by a Director of a Thai Petrol Service Station (TS4). The point TS4 makes is that as a 'trading business', i.e. buying some commodity and then re-selling it, the margins on this process are the sole source of income, so any interest on paying for the commodity is going to be a large proportion of the income:

> TS4 (Director, Thai Petrol Service Station): "It depends on types of business. If it's a manufacturer, it's ok to pay interests if necessary. My business is a trading business. If we're having to pay interest it's not profitable."

Seasonality means businesses have an inconsistent volume of invoices. Thus, it was not seen as appropriate for seasonal businesses to use invoice discounting or factoring, as described by the Director of a UK Food Manufacturer (ES7):

> ES7 (Director, UK Manufacturer): "I suppose it depends on the time of year for us because we find that like at this time of year we've not got as many invoices out there that are not paid. Whereas from October to January people are buying in more stock so we, our books will be,

our debtors list will be a lot bigger. And that would possibly be a time when we would look to factoring. But actually that's, also the time of year when we are generating more cash, so it's the time we don't need it as much. Whereas from end of January through to June, now, we are cash poor. But we haven't got as many people on our debtors list. So, the nature of our business is that we do more business in the latter half of the year leading up to Christmas than we do at this time of the year… But it's not, the factoring wouldn't help us with that I don't think."

Most DSCF and TSCF practices are post-shipment SCF, using invoices as collateral, but many businesses also need pre-shipment SCF mechanisms, e.g. purchase order finance or inventory finance, as commented on by the Founder of a UK Drink Manufacturer (ES6). The mechanisms are almost always dyadic not triadic:

> ES6 (Founder, UK Manufacturer): "Well the thing is its different models for different businesses. Some people with factoring [find] it suits them fine already because some people can get an invoice and then start to process the order after the invoice… But for a company like ours where people come in and order and expect delivery in two or three days, supply chain finance is just the tip of the iceberg for us."

Pre-shipment SCF practices were rarely available to small firms even in dyadic arrangements; this was especially the case in the view of banks:

> EB1-2 (Relationship Manager 2, UK Bank 1): "for those SMEs in [EB1] I guess the products and solutions available to them are a lot more restricted than they are for the corporate clients. So, there's not a lot of I guess pre shipment finance that we can offer to those type of clients."

The founder of a UK Drinks Manufacturer (ES6) who could not get access to banks' inventory finance due to the firm's small size and newness to the market, had to adopt inventory finance from a non-bank financial institution instead, as described below:

> ES6 (Founder, UK Manufacturer): "It [Inventory finance] doesn't exist for a business like ours. If you're doing five million or 10 million and you're a business that's 10 years old then that's an option but for a business that's two year's old the only asset we really have in the overall organisation is our stock and without years and years and years of data on where the stock is and how much you sell on a month by month basis then it's not an option for us to do something like that."

On the other hand, an established UK Manufacturing firm (ES9) was provided with inventory finance by one of the Big Five UK banks[5]. Furthermore, this established UK Manufacturing firm (ES9) used relatively low-priced invoice discounting to pay back inventory finance. This is in contrast to the small, newly established food manufacturer (ES6) who had to use factoring for the same purpose, as described in the following quotes:

> ES6 (Founder, small, newly-established UK Manufacturer): "But essentially we've been taking stock loans [inventory finance] and collateralised loans for stock so we can actually get the money for the stock before we produce the stock. And then on the other side we've been using a factoring service as well to be able to cash the invoices in quicker."

[5] Barclays, HSBC, Royal Bank of Scotland, Lloyds and Santander (Financial Times, 2013) (Source: https://www.ft.com/content/ff25bf24-c944-11e2-bb56-00144feab7de accessed 4 March 2021.

ES9 (Finance Director, established UK Manufacturer): "we've borrowed money to pay for the goods on the trade loan [inventory finance] and then we've invoiced the goods to the customers and then borrowed money on the invoice."

As described earlier, this back-to-back financing becomes problematic for triadic mechanisms, because it generally means the providers of pre- and post-shipment are different, and therefore there is a risk of double financing.

5.7.2 Regionality

5.7.2.1 Developed vs. Emerging markets

Informants regarded triadic finance as being more attractive to suppliers in certain regions where dyadic finance was thought to be more expensive, if these suppliers were offered TSCF by an anchor firm in a more developed economy:

EB3 (Relationship Manager, UK Bank 3): "the supplier then, well they, the supplier if you're in India or somewhere else they might, payment facilities in their country might be more expensive. Whereas utilising [anchor firm] wholesalers' facilities might be cheaper, which is why they might use it."

ES2 (Director, Swiss Manufacturer): "But if, as I say one of our raw materials is coming, actually two are now coming out of China and getting supply chain financing or any trade financing for raw materials coming out of China is very very difficult indeed. In Europe it was easier but even out of South Africa it is very very difficult. So, these are the things that raise the cost and financial risk to SMEs massively. And this is actually why we've started to look more heavily at supply chain financing rather than trade financing."

As previously discussed in Chapter 2, factoring is relatively expensive, which was evident for a Swiss Manufacturer (ES2) whose factory, located in Africa, only had access to factoring:

> ES2 (Director, Swiss Manufacturer): "Yes, it costs us a little bit, but we then get paid on the day of invoicing which is very good. But that obviously is more expensive because we are small and therefore the banks, we obviously get a higher, we have to pay a high interest rate on any form of financing like that."

Factoring is commonplace in emerging markets compared to invoice discounting, which is often offered in developed markets. As discussed in Section 5.2.1, recourse factoring was offered by five Thai banks while invoice discounting was not available in Thailand. A Relationship Manager at a Thai Bank (TB7) commented on the use of factoring to fill the working capital gap:

> TB7 (Relationship Manager, Thai Bank 7): "One of my customers is a supplier of a big telecommunications services provides. It took my customer 6-7 months to get paid. SCF [factoring] helps them fill the gap. However, the problem of factoring is the difficulty of validation and thus take a while before SMEs get money"

Nonetheless, as factoring is closer in nature to reverse factoring than invoice discounting regarding confidentiality of the arrangements, this indicates that the move to TSCF would be easier, as discussed earlier in Section 5.6.4 on Confidentiality.

5.7.2.2 Competition

Due to the competitiveness of the financial industry in Thailand, Thai banks take an initiating role by approaching anchor firms and trying to persuade them to adopt RF or distributor

finance. This is unlike TSCF (particularly RF) in the UK, where the anchor firm initiates the relationship. Owing to the initiating role of Thai banks and the need to gain access to information and cooperation from anchor firms, Thai banks were willing to take a riskier approach, compared to their UK counterparts, by offering RF or distributor finance both with and without a credit guarantee from anchor parties. This willingness to take greater risk due to this competitiveness has thus led to variations in TSCF mechanisms.

Without a full guarantee from the anchor firm, RF offered in Thailand deviated significantly from the typical RF arrangements in the literature (e.g. Lekkakos and Serrano, 2016; Liebl et al., 2016). Thai banks offered RF as an overdraft instead of a purchase of accounts receivable. Even though the key feature of TSCF relationships, a credit guarantee by the stronger credit rating party, was not in place, banks still benefitted from gaining access to valuable supply chain data that could be used to assess and manage risks. This access not only drove down the financing costs but also improved SME firms' (suppliers') access to financing.

Similarly, Thai banks had little choice but to offer distributor finance without a partial guarantee from the anchor firm. A Relationship Manager at a Thai bank (TB4) explained the way TB4 offered distributor finance:

> TB4-1 (Relationship Manager 1, Thai Bank 4): "We are collaborating with eights public companies both state-owned and private firms to provide finance to their distributors. These corporate firm provide us with the list of their customers and related information."

While distributor finance was considered riskier for the funder compared to RF, especially without a guarantee, distributor finance was evidently more popular among anchor firms than RF, owing to its benefits in terms of increased sales and taking risks out of the transaction. As

described in Section 5.2.2, one Thai bank's portfolio contained far more clients for distributor finance than RF. Since banks could not convince anchor parties to partially guarantee the arrangement, banks often requested a "minimal collateral" to reduce risks (DTB6, 2016). Nonetheless, no collateral was also possible as commented on by a Relationship Manager at a Thai bank (TB8):

> TB8-1 (Relationship Manager, Thai bank 8): "The sponsor [anchor firm] gave us a list of selected dealers. These dealers can sign up for buyer finance [distributor finance] with a lower interest rate and <u>no collateral is needed</u>"

This appears to make such an arrangement non-triadic, since the anchor party no longer acts as guarantor in a relationship that seems to exist purely between finance provider and recipient. But it is still classified as triadic here since SC information is shared between the anchor firm and the bank. This shows that the Dyadic-Triadic Distinction is not completely clear-cut (as also suggested earlier by certain features of traditional factoring). A quote from a Relationship Manager at a Thai bank represents the view of the bank towards distributor finance:

> TB6-3 (Relationship Manager 3, Thai Bank 6): "<u>Distributor finance is riskier compared to RF. RF is a post-shipment arrangement covers period after delivery in which we only wait for the payment from the [anchor firm]. Distributor finance, in contrast, is pre-shipment financing where [SME firms] use our money to buy stocks. Thus, we have to wait for the client to sell the goods, collect the money, and hopefully repay the loan."</u>

Since the UK banking industry appeared less competitive than Thailand, most UK businesses, especially small ones, typically used One Bank Only, which was sometimes described as being 'naïve':

EB4 (Relationship Manager, UK Bank 4): "It depends on the customer really. What you find is that in the UK that you'll have a customer who will use their one bank for absolutely everything."

ES16 (Director, UK Professional Service Firm): "Well I have two banks, so I have my personal bank, which is bank I've had since I was a child and then you have a business bank, so you only have one business bank and that's how it works."

ES11 (CEO, UK Wholesale Firm): "not like Europe, not like Thailand or India where you will have two bank accounts, you will have separate arrangements with both those banks, and you will have better facilities. And you will have better negotiation skills. In England we are naïve because we could do it, but we don't. And the other thing is that the way that the banking system works in the UK is they will put a charge, or they will register that they are a company's bankers. So, businesses believe that they should only have one bank. It's scary in the UK."

This 'naivety' has an implication for the core category (the Dyadic-Triadic Distinction) because it suggests that UK firms may be more reluctant to engage in triadic arrangements where they get finance from another party other than their normal bank. Unless relationships between a firm and their bank had badly broken down, changing banks was uncommon in the UK, as explained by the Managing Director of a UK Financial Service Firm (ES10):

ES10 (Managing Director, UK Financial Service Firm): "And so basically in the UK you tend to have predominantly one bank, so particularly for an SME you work with that one bank who provide you with your facilities, whether it be loans, overdrafts etc…And I think traditionally in the UK you tend to, once you've got your bank they have to do something pretty drastic for you to then change and refinance all your, its only, usually you tend to stay with the same bank for many years as an SME."

Despite being incentivised to change banks, UK firms found moving was not easy:

> ES16 (Director, UK Professional Service Firm): "they've created these six challenger banks and these six challenger banks have been given, well they're given money by [Bank B] and [Bank A] to offer incentives to companies to change banks to them. So, I was offered £50,000 by [Bank C] and probably a similar figure by [Bank D], but I haven't changed as yet, I'm not looking at changing yet...I'm not really, I mean the money is still there and I do believe they are struggling to get the numbers to move, they're really struggling, I don't think it's happening as good as it should be."

This suggests a certain level of conservatism that means competition among finance providers, and among SCF arrangements, will have less effect than might be expected.

5.7.2.3 Culture of Late Payment

Late payment is an ongoing issue in the UK where informants interpreted it as an aspect of the culture:

> EE4 (Expert, UK SME Association): "there became a culture in this country to touch on late payment of people holding onto their money longer. So, we saw some examples of businesses providing goods or services and maybe waiting 120 days, four months, to be paid for a small business."

> EE4 (Expert, UK SME Association): "one third of payments are late. I'll leave this with you. The average value of each late payment is £6,000. 37% have cash flow difficulties. So, this is the main one, 50,000 small businesses every year finish, they close because of late payments."

> ES3 (Founder and Finance Director, UK Manufacturer): "don't get me wrong we do get people who pay exactly bob on, but that's not life, that's not reality."

> ES14 (Managing Director, UK Professional Service Firm): "Well compared to our standard payment terms I suppose on average most of them are 21+ days late."

These views show how important the general issue of post-shipment finance is, and how attractive it is to involve the late-paying buyers in providing it, as is meant to be the case with triadic arrangements. Problems of late payment link closely to power in relationships, as described below:

> EE4 (Expert, UK SME Association): "The small food providers into big supermarket, 120 days to get paid is just crazy. Because they have the money, we know they've got the money. It's just they're holding onto it for as long as possible."

> ES1 (Managing Director, UK Educational Service): "when we invoiced the [N] company there were payment terms on the invoice but I mean that was like pie in the sky, it was like they didn't pay any attention to that it was just we'll get the money out of them as soon as they can get it to us."

> ES2 (Director, Swiss Manufacturer): "it's actually more often the big clients that don't pay on time because they know, they believe that they are big, and they can squeeze their small suppliers."

Some SME firms described late payment as a game:

> ES2 (Director, Swiss Manufacturer): "But it's very difficult, very tricky, very risky to do that sort of thing, but these are the various games that everybody plays in this space and obviously with big customers or big clients they often don't pay on time."

> ES2 (Director, Swiss Manufacturer): "Yeah so these are all the games that one has to play particularly in the food industry, but I guess it's in, in my experience it's been in the food industry, but I guess it's in all the industries it's like that. Big clients are often the most unreliable payers."

UK Government agencies who are supposed to pay in 30 days also paid late according to a Director of a UK Social Enterprise Firm (ES13):

> ES13: (Director, UK Social Enterprise Firm): "Yes. Dreadful. They [government agencies, in this case specifically a local authority] will tend to pay quarterly in arrears, so we work for three months and then if we've hit the targets that they've set. When we give them an invoice and then they'll pay us three months later. So, it can often be six months before we get paid."

This informant explained that there were two reasons for a local authority to pay late. First, they were paid late by the central government. Second, if they could keep the money in the bank even 10 days longer the interest could be used to pay two schoolteachers. This is seen as a culture of late payment in the UK, but actually individual organisations have reasons to pay late and to balance their own working capital gap. This is consistent with a Public Procurement Officer at a UK local authority (EE3) who said that even if the invoice could be paid earlier the council would normally hold monies for about two weeks.

> EE3 (Expert, UK Public Procurement): "It depends on the payment terms. Generally, we're on 25-day payment terms. So, if it came in on the Wednesday and got pushed through and

everything potentially it could go on that Thursday, but we tend to hold it, we'll probably hold it for another two weeks. And then it will get paid probably about 10 days before its actually due so that it's got time to go to their bank account and stuff."

Due to the Culture of Late Payment in the U.K, small businesses traditionally adopt DSCF to fill the working capital gap. TSCF, more specifically RF, in theory should solve the problem by making the late payers themselves underwrite the loan (TSCF): the primary source of the risk (late payment) becomes the party with primary responsibility (the guarantor) for the financing. However, despite TSCF helping to mitigate the risk of non-payment, it appeared to worsen late payment instead of eradicating or alleviating the issue as indicated earlier in comments on how anchor parties insisted on much longer payment terms in exchange for offering a TSCF programme.

5.7.2.4 Government Initiatives

In the UK, there have been two Government SCF Initiatives, on reverse factoring and dynamic discounting, where the latter is a variant of RF in which the buyer acts as the funder using its own money. These initiatives aim to help mitigate the issue of late payment, but according to a representative from an SME association (EE4), they appeared to be unsuccessful among SME firms due to political change:

EE4 (Expert, UK SME Association): "My feeling is that it hasn't, if it would have worked properly, we probably wouldn't have this conversation because it would have solved a lot of the problems, so I'm guessing it hasn't done. And whether that's because it was from the former government and things change, the politicians change and then someone else comes in and it doesn't properly follow through all the way down. It possibly is to do with that. But

> certainly, the principle of it is very good. But I'm not sure it is, I'm not aware that it fully developed and made the impact."

The newness of SCF in Thailand means there was not yet any government initiative regarding TSCF arrangements. Nonetheless, TB5, which is one of the state-owned banks, has launched reverse factoring programmes (in a variant form) for SMEs who are suppliers of government agencies, as commented on by its Relationship Manager:

> TB5 (Relationship Manager 1, Thai bank 5): "<u>This [RF] is for SME suppliers of state agencies, state enterprises, state universities, local government. Suppliers of public organisation companies that are listed on the Stock Exchange of Thailand or the Market for Alternative Investment are also eligible for this [RF] programme</u>."

TB8, one of the six Thai banks that offered RF, also saw an opportunity in the public sector. This Thai bank (TB8) focused on providing RF (i.e. a variant) to SMEs who won public sector construction contracts, as explained by a Relationship Manager at a Thai Bank (TB8):

> TB8-2 (Relationship Manager 2, Thai Bank 8): "<u>We offer SCF to SME construction firms who win a tender contract of all the 11 government departments. The government departments acknowledged about the offers, but they did not provide guarantees</u>."

Because governments have a dual role, as promoters of SCF in industry, and as users of SCF schemes themselves, the study of the connection between government and SCF looks like a promising direction for further work, as suggested in Chapter 7.

5.7.2.5 Legality

Both DSCF and TSCF arrangements involve aspects of Legality that were mentioned by informants. The relevant legal relationship is between a bank and its customer(s), either the SME firm or both the SME firm and the anchor firm. A DSCF arrangement simply involves a legal relationship between two parties, a bank and the SME firm. TSCF arrangements involve a legal relationship in two dyads ─ bank and anchor firm, and bank and SME firm ─ but significantly not between the supply chain partners (SME and anchor firm). For example, in a UK Recruitment Service Firm's (ES5's) RF arrangement, there were two separate contracts, the Client Agreement and the Supplier Agreement, as described in detail in Section 5.6.3.

Due to legal implications, banks imposed constraints in terms of which part of the world TSCF could be used. This may partly contribute to TSCF not being widespread:

> EB1-2 (Relationship Manager 2, UK Bank 1): "Also, as well I guess we're looking at the UK here for [RF], you can do this as well internationally. So, we have only approved countries are the UK and Ireland, Hong Kong and Singapore. So, if there's any other countries involved then we do have to do some due diligence around that. So that's not automatically approved, so it has to be signed off and due diligence done around that if it's any countries."

> EB1-2 (Relationship Manager 2, UK Bank 1): "there's legal implications, tax implications, I guess there's high risk countries out there as well that we need to do due diligence on."

Furthermore, there is a need for an appropriate legal and regulatory environment to facilitate the adoption of SCF. Unlike the UK, Thailand has adopted a law, the Business Security Act (BSA) B.E. 2558, which came into effect in July 2016, to help facilitate the application and adoption of SCF, especially TSCF. The BSA allows businesses to use their movable assets

including outstanding invoices, inventory, and machinery as securities for short-term financing. Prior to the launch of BSA, only immovable assets such as land or buildings could be used as collateral. This precluded both dyadic and triadic forms of SCF. However, the assignment of accounts receivable has become legally possible after the launch of BSA. The previous provisions of Civil Law did not cope with risks in relation to SCF transactions. The following quotes from an International Financial Institution Expert explain the importance of legality:

> EE5 (Expert, International Financial Institution): "Before the Business Security Act B.E. 2558 came into effect, factoring in Thailand was based heavily on manual processes to verify each individual invoice and thus took several days before SMEs can get the money. Moreover, due to high risks, banks only advance 60-70% of the invoice and thus cost of finance was very high. <u>The new law helps enable the registration of accounts receivable in which SMEs can now borrow money [i.e. factoring] based on a sales ledger using invoices as collateral instead of selling an individual invoice</u>. Banks only conduct a regular audit without the need to verify every invoice."

> EE5 (Expert, International Financial Institution): "Even though there are still concerns regarding the enforcement of the Business Security Act B.E. 2558 particularly regarding lenders' rights, some banks started offering triadic SCF in 2018. <u>The law helps facilitate SCF arrangements, but its newness means banks have to find their ways to mitigate risk in offering SCF."</u>

5.7.3 Legitimacy

Legitimacy, rather than legality, in accounting practice has played a significant role in TSCF adoption. This is evident from an anchor firm that pressured a UK Recruitment Service Firm

(ES5) to participate in a TSCF arrangement, and later terminated that arrangement. ES5 believed the anchor firm had to terminate the arrangement due to issues with accounting practices in the TSCF arrangement:

> ES5-1 (Chairman, UK Recruitment Service Firm): "They stopped doing it. Now I think, I'm not sure but it was a FTSE250 company, so it's a public company and I think they had some issues with their accounting practices that didn't agree with the fact that they were doing supply chain finance.

This TSCF arrangement did not last long. Legitimacy also involved government-supported norms, and ES5 again commented that a reason for terminating the TSCF arrangement was the unfair extended payment terms which breached government policies:

> ES5-1 (Chairman, UK Recruitment Service Firm): "Obviously, it has an effect doesn't it on how you publish your accounts and debtors and revenue, so I think that certainly the UK frowns on people giving 120 day, making people have 120-day terms. A lot of this particular client customers were public sector customers and the government was pushing for everyone to have this fair pay, fair policy in terms of payment of suppliers. So, it might have been in breach of those government policies because they were, a large number of their customers were public sector. I'm reading into that, I'm making an assumption there, but I think that's probably the case, because it stopped as quickly as it started almost."

The collapse of Carillion in January 2018 had turned the spotlight onto the issue of late payment, as well as the Accounting Treatments of TSCF practices:

> EE4 (Expert, UK SME Association): "We've been talking about late payment for, since 2008 as a big problem. Government said yeah, we understand, we understand, we understand but

> they didn't do a lot. After Carillion it was oh now, we understand what you mean because we've seen what it can do and because of Carillion those next people further down working with Carillion didn't get paid at all. Not just late payment, no payment. And it was like oh ok yeah now. So since then what we say is making things happen a bit more because they now really understand what happens when a big business doesn't do the right thing, doesn't fulfil its obligations. So yeah I think unfortunately it needed something like that to happen for them to understand."

The legitimacy of the triadic mechanism is complicated by the fact that the RF arrangement is not treated as a loan by the bank. The supplier gets the money so it seems as though the supplier is the borrower, but in the event of a default the bank cannot pursue the supplier. The following quote by a Relationship Manager at a Thai Bank (TB6) explains why banks could not really define the borrower in a TSCF arrangement:

> TB6-3 (Relationship Manager3, Thai Bank 6): "We [TB6] record suppliers as borrowers of reverse factoring simply because our money goes to the suppliers. However, we have no-recourse against the suppliers. Although we assume the buyer's credit risk for reverse factoring, we cannot say that the buyer is the borrower. The buyer only sign a service agreement. There is no loan agreements between the bank and the buyer."

In Thailand, as a variant of TSCF, RF and distributor finance were offered as an overdraft facility. This meant that firms lost the RF benefits of off-balance-sheet financing in which SME firms can effectively obtain financing without incurring debt on their balance sheet. Instead, an overdraft is on-balance-sheet financing that is indisputably recorded as a liability:

DTB8 (Thai Bank 8's Supporting Document): "[Distributor finance] is an overdraft for paying for goods or service to the sponsors [anchor firm] only. The payment can be done through TB8's Supply Chain Portal or at any branch throughout the country."

5.8 Connecting the categories

This section aims to summarise how each of the main categories is connected to the core category, and then how the main categories are connected to each other.

5.8.1 Connections between main categories and the core category

The first category ─ Risk ─ comprises four sub-categories: Risk Appetite, Risk Mitigation, Risk Sharing, and Risk Transfer. Risk Appetite informs the way banks identify which sectors they prefer to provide DSCF or TSCF to. For example, TSCF was considered appropriate to the construction sector instead of DSCF. Risk Appetite also explains why SME firms choose not to use any type of financing, either SCF or non-SCF and prefer Self-reliance. Variations of TSCF found in Thailand involved different ways of achieving Risk Mitigation, either by requiring an anchor party to guarantee the finance, or requiring the anchor firm to share information with its bank about its supply chain partners. The last two sub-categories ─ Risk Sharing and Risk Transfer ─ appear to be the most important aspects of risk in relation to the DSCF-TSCF transition. Entering into TSCF arrangements, SME firms could transfer risk (using RF) or share risk (using distributor finance). For DSCF arrangements, risks could only be shared on non-recourse contracts; risks remained fully with SME firms in recourse contracts.

The second category ─ Relationship ─ consists of five sub-categories. Firstly, Power in Relationships deals with the difference between the powerful UK banks and the relatively powerless Thai banks, and how the power of banks contributed to the formation of TSCF

relationships. Unlike in the UK, where the anchor firms initiate TSCF, Thai banks took a proactive role in promoting and initiating TSCF. Power also had implications for the ability of anchor firms to pressure SME firms to move from dyadic to triadic schemes, and to extend payment terms. Secondly, Trust in Relationships was important between SME firms and their banks. Distrustful customers tended to avoid using finance completely, or minimally. DSCF relationships between SMEs and their banks, however, tended to produce trust between them. In contrast TSCF relationships connected banks with SMEs that had not been their customers, so potentially involve much less trust. Also interesting were the trust-based relationships between SME firms and their own suppliers, which helped them refrain from using DSCF (in some cases), and TSCF (in other cases). Thirdly, Virtuality in Relationships was concerned with how readily firms used impersonal, online platforms as the primary form of interaction. Although DSCF and TSCF involve the use of the online systems of an SME firm's bank, and the anchor firm's bank, respectively, TSCF was more often associated with an electronic platform and therefore a virtual relationship. Smaller firms that typically used online banking infrequently would find it easier to move to TSCF relationships as a result. Fourth, Longevity was another sub-category of Relationship. A long-term relationship between an SME firm and anchor party was typically a pre-condition in offering TSCF arrangements to SME firms, and equally, an SME firm entering into a TSCF arrangement with its customer could do so aiming for a long-term relationship. Ironically, however, TSCF generally means the absence of a long-term relationship between the provider and recipient of finance. In this way, the DSCF-TSCF distinction can involve a trade-off between long-term relationships in the supply chain and long-term relationships with finance providers. With regard to a DSCF relationship, although technically it involves a one- or two-year contract, it often becomes a long-term relationship in which SME firms are either locked in, or find it difficult to get out of the relationship. Finally, Transition in Relationships refers to the way the adoption of a new mechanism like TSCF

means dropping the previous mechanism, and in particular participation in TSCF can damage existing DSCF relationships. Moreover, moving from DSCF to TSCF may not always be perceived as reducing costs, as is theorised in the literature (e.g. Iacono et al., 2015; Lekkakos and Serrano, 2016). And entering into TSCF may result in SME firms having to deal with the complexity of using both DSCF and TSCF mechanisms at the same time.

The third category ─ Awareness – incorporated several ways in which the adoption of TSCF, in particular, was influenced by knowledge or information. Awareness as Promotion concerned the need to widely publicise and raise awareness of TSCF in which anchor firms were expected to take responsibility in raising awareness. There were other players such as Thai banks who took the initiative in raising awareness of TSCF, and the UK government which seemed to fail in raising awareness about its 2012 SCF Scheme among SME firms and relevant actors. Awareness as Promotion, however, raised suspicion that anchor firms were trying to 'sell' triadic arrangements to their suppliers. Awareness was not just being aware of the possibility of reverse factoring, but also being aware of the fact that anchor firms had their own reasons for trying to get SME firms to agree to participate. Impediments to Awareness involved issues like the divisionalisation of banks, in which DSCF belonged to an SME Division, and TSCF was the responsibility of a Corporate Division. Awareness as Signalling was an important concern among informants in two ways: either signalling deception, or signalling vulnerability. Signalling deception was the way in which anchor firms inadvertently signalled that they wanted suppliers to participate in TSCF to persuade them to accept worse payment terms. Signalling vulnerability was an SME firm's concern about being perceived as weak or in financial distress when using external working capital finance, and was particularly a problem for TSCF schemes. The last Awareness sub-category, Transparency, indicated ways in which informants thought transparency differed for different SCF schemes. Banks preferred invoice

discounting to overdrafts, due to its transparent nature and good audit trial. With a more complex triadic arrangement, TSCF relationships created issues of price transparency: SME firms could be discriminated against in terms of the offered price of TSCF when there was no transparency in how the anchor firm determined price individually for each SME firm. Price transparency also operated in the reverse direction, where the SME firms' cost of finance was not transparent to the anchor firm, so the anchor firm ended up offering TSCF to an SME firm at a higher cost than its existing DSCF.

Control, the fourth category, comprised four related sub-categories. Firstly, Manipulation involved the non-anchor firms' concern about being manipulated when participating in TSCF arrangements. This was mostly evident as a prolonged payment term extension in exchange for a TSCF offer. The sub-category of Complexity was concerned with the compatibility between the systems needed for SCF implementation, and the level of sophistication of the non-anchor firms. TSCF arrangements that involved three or more parties were perceived as more complex compared to DSCF relationships. The sophistication of firms can often be predicted from their size or years of establishment, and medium-sized firms seemed to be more sophisticated and thus were compatible with more complex SCF mechanisms like invoice discounting or RF. Smaller firms were more likely to need to use factoring, where complex credit control and payment collection processes are outsourced to factors or banks. An absence of standardisation of TSCF means an SME will have to use different systems with different anchor firms, so again increasing complexity. More importantly, complexity came from the selective nature of a TSCF arrangement (covering only one buyer of suppliers' invoices), where firms often ended up using both DSCF and TSCF systems at the same time. Third, Flexibility concerned issues such as how much money could be drawn down in advance, when it was available, and whether it was required without approval from the anchor firm. DSCF was perceived to be more flexible

compared to TSCF in this respect. Interestingly, the 100% drawdown amount of RF was seen by SME firms as a burden, rather than a benefit, because it allowed no choice. Flexibility also involved the option between committed and non-committed credit facilities. TSCF is non-committed and gives flexibility to the anchor firm and banks to terminate with immediate effect, but at the price of creating uncertainty for the non-anchor firm. The last sub-category ─ Confidentiality ─ is an important concern of SME firms. While SME firms prefer to keep their financing arrangements secret, Triadic SCF arrangements, and a triadic-like structure financing such as factoring, are disclosed to customers. This makes DSCF, like invoice discounting, more appealing than TSCF arrangements.

Finally, the fifth category, Context, showed the need to be careful about generalising on the way the Dyadic-Triadic Distinction is considered. The first sub-category ─ Nature of Business ─ involved characteristics of SME firms such as size, sector, years of establishment, and seasonality, all of which affected preferences for different SCF mechanisms. The next sub-category, Regionality, affected the way TSCF in particular was offered. Unlike UK banks, Thai banks proactively initiated TSCF arrangements instead of the anchor firm due to the high level of competition in the Thai banking industry. TSCF arrangements offered in Thailand are mainly variants of RF and distributor finance where the anchor firm collaboratively shared information rather than providing guarantees. Another aspect of Regionality was the nature of the legal frameworks to enable and facilitate SCF adoption. The next sub-category was culture, and TSCF rather than DSCF appeared to be intended to deal with a general culture of late payments, although in practice tended to lead to even later payments by buyers. The last sub-category, Legitimacy, indicated the importance of issues such as the need for an appropriate accounting standard, an issue that was problematic for TSCF but not DSCF.

5.8.2 Connections between the categories

There are clear links between categories. These links become obvious in the data analysis, where a specific fragment of an interview could have been coded under more than one main category, even when one category was more strongly represented by a segment of data than another. Such connections links have been noted several times in the previous sections. Figure 5-8 shows the main connections identified in the analysis. Each entry in the figure consists of the sub-category of the first category (column), the sub-category of the second category (row), and the nature of the connection. For example, the cell linking the Risk column and the Relationships row shows a link between Risk Appetite and Trust in Relationships. This link is one of mutual support in the sense that a certain level of risk appetite allows a party to be trusting in some relationship, and the existence of trust encourages an appetite for risk. Because the informants' language is sometimes vague, and the interpretation subjective, there are many speculative connections at the detailed level. But the aim of this analysis is just to show the main types of connection between the main categories, and to suggest that it is the main categories as a whole set of connected categories, not the categories in isolation, that together deal with the informants' main concern – the core category of a dyadic-triadic distinction.

	Risk	Awareness	Relationship	Control
Awareness	Risk Mitigation – Awareness in terms of Transparency (Simple support)			
Relationships	Risk Appetite – Trust in Relationships (Mutual support)	Awareness as Signalling – Trust in Relationships (Undermining)		
Control	Risk Mitigation – Flexibility (Mutual support)	Awareness as Signalling – Confidentiality (Undermining)	Power in Relationships– Manipulation (Simple support)	
Context	Risk Appetite – Nature of Business (Joint effect)	Awareness as Promotion and Responsibility for Awareness – Regionality (Prediction)	Relationship Longevity – Regionality (Prediction)	Complexity – Nature of Business (Prediction)

Figure 5-8 Connections between the five Categories

In the remainder of this section a brief account is given of the entries in each cell of Figure 5-8.

<u>Risk (column) and Awareness (row):</u>

The connection between Risk and Awareness is through the Awareness sub-category of Transparency. Both a supplier and bank indicated that SCF was more transparent than, for example, an overdraft because each transaction under the financing is visible, so Transparency naturally connects to the Risk Mitigation sub-category. This is really a one-way supporting relationship in the sense that Awareness supports Risk Mitigation, but Risk Mitigation does not enhance Awareness.

Risk (column) and Relationship (row):

The connection between Risk Appetite and Relationships (Trust in Relationships) was illustrated by the preference of small firms to be self-reliant, i.e. relying only on internal financing in order to avoid risks. These SME firms could do this by maintaining trusted relationships with their own suppliers. In this case, the two categories (Risk Appetite and Trust in Relationships) are mutually supporting.

Risk (column) and Control (row):

The connection between Risk Mitigation (Diversification) and Control (Flexibility) can also be seen as mutually supporting, where SMEs typically avoid being over-reliant on a few customers, which can mean SMEs prefer more flexible DSCF to TSCF practices.

Risk (column) and Context (row):

The connection between Risk Appetite and Nature of Business was evident in fragments of interviews referring to finance providers' preference for providing Triadic SCF to certain industries (i.e. Sectoral Preferences). Although Risk Appetite belongs to the finance provider, and Context comes from its environment, the two are only meaningful to the finance provider when taken together: they have a joint effect

Awareness (column) and Relationship (row):

Moving on to other main categories, Awareness is connected to Relationships via Awareness as Signalling. Under Signalling, where the buyer firm clearly signalled it was demanding extended payment terms in exchange for offering triadic SCF, there is an effect on Trust in the buyer-supplier relationship. In this sense the connection involves one factor (Signalling payment extension) undermining the other factor (Trust in Relationships).

Awareness (column) and Control (row):

Awareness is connected to Control via Confidentiality (a Control sub-category), again via Signalling as an Awareness sub-category. In particular, suppliers were concerned that in triadic SCF they were signalling financial weakness by needing external working capital.

Awareness (column) and Context (row):

Awareness as Promotion, and also Responsibility for Awareness, are connected to Context via the Regionality (i.e. Politics) sub-category of Context, with one UK informant, in particular, describing the UK government's initiative of promoting triadic SCF. This is a predictive relationship in the sense that the regional context predicts that certain types of SCF will be promoted.

Relationship (column) and Control (row):

Relationships, particularly through the sub-category Power, are connected to the Manipulation sub-category of Control. Suppliers felt pressurised to participate in triadic SCF schemes that were being offered by powerful customers, and thereby felt they were being manipulated to accept such schemes.

Relationship (column) and Context (row):

Considering Relationships, one connection with Context is that banking relationships were clearly different in the two regions, the UK and Thailand. Informants said that UK relationships were longer-lasting, and clients tended to use the services of just one bank, which was unlike Thailand where using more than one bank was commonplace. This clearly connects the Longevity sub-category of Relationships with the Regionality sub-category of Context in a predictive sense, i.e. region typically predicted the length of a financing relationship.

Control (column) and Context (row):

The final pair of main categories, Control and Context, is connected through the Complexity sub-category of Control and the Nature of Business sub-category of Context. In particular, informants talked about how small, less sophisticated firms found it hard to deal with the potential complexity of triadic SCF, where a supplier would have to use different platforms for each buyer, and also for dyadic SCF, where factoring was clearly simpler for the smaller supplier than invoice discounting. So, Nature of Business predicted tolerable Complexity.

It is important to appreciate the nature of these connections, as they help us to understand how the concepts and sub-categories identified from this research do not operate in isolation but are related to each other. What informants need to do when forming their understandings of SCF is not to think separately about Risk, Relationship, Awareness, Control, and Context, but to appreciate how different forms of SCF can be assessed under these categories, and how the categories themselves are mutually dependent. I have suggested in Chapter 7 that the practical use of the findings as a kind of aide memoire should incorporate this analysis of connections as well as the categories themselves.

5.9 Conclusion

This chapter presents the findings of this PhD study, starting with the core category, the Dyadic-Triadic Distinction, followed by the five main categories. Each category is discussed using quotations from the informants to show how they explained and responded to the meaning of the core category. The chapter ends with the connections between the main categories and the core category and connections between the main categories themselves.

In the next chapter, the core category and the thesis of this research study ─ that in the perception of SCF 'Three is a Crowd' ─ are discussed in the context of the current literature to show their relevance and contribution to existing knowledge. The findings are then discussed in relation to a chosen formal theory, transaction cost economics (TCE), in terms of the compatibility and incompatibility of the theory with the findings. A model from the findings that goes beyond TCE explanation, and which helps explain why 'Three is a Crowd', is proposed and discussed.

Chapter 6 Discussion

6.1 Introduction

The previous chapter presented findings from interviewing the key informants ─ SME firms and banks ─ about their experiences and thoughts regarding the adoption of SCF, and this was augmented by expert interviews and supporting document analysis. From these data a possible explanation of how informants constructed their understanding of SCF, as well as the social processes and motivations involved in the SCF adoption decision, emerged.

This chapter discusses the findings and is organised into five sections as outlined in Figure 6-1. The first section discusses the core category ─ the Dyadic-Triadic Distinction ─ and the thesis of this research study ─ Three is a Crowd ─ in the context of the current literature, to elucidate the relevance and contribution to existing knowledge. The subsequent section presents transaction cost theorising, in which the five related main categories from the Findings ─ Risk, Relationship, Awareness, Control, and Context ─ are discussed in terms of what is compatible with transaction cost theory, and what is not, thus identifying the extent to which transaction cost economics can explain informants' understandings of the Dyadic-Triadic distinction. This is followed by a proposed model, particularly based on the findings that go beyond transaction cost theory, which helps explain why 'Three is a Crowd': why moving to triadic arrangements (TSCF) is problematic. The following section examines the relevance of the five articles that were published after the first draft of the thesis had been written. The last section concludes the chapter and gives an overview of the next chapter.

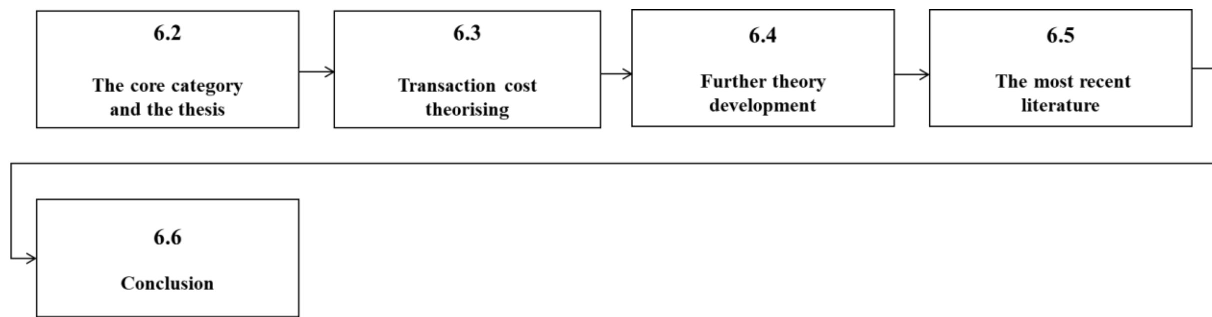

Figure 6-1 Flow of Chapter 6

6.2 The core category and the thesis

6.2.1 The core category is about the coupling of supply chain and financing

The grounded theory notion that a core category emerges from informants' main concern led to the core category of this study ─ the Dyadic-Triadic distinction. This, in a nutshell, is the main concern that participating in a triadic SCF arrangement involves engaging in a new financing relationship, while fully or partially disengaging from a previous dyadic relationship. The implication is that the participating firm (SME) gets money from a bank that does not think of the SME firm as its customer, even though the firm pays interest and fees to the bank. Participating in a TSCF relationship thus results in a change to the experience of Risk, Relationships, Awareness, Control, and Context. This is particularly so because the dyadic-to-triadic transition often involves the need to simultaneously maintain both dyadic and triadic relationships.

I argue that the reason that TSCF is experienced as being problematic is that it creates a more complex connectivity, especially for the participating non-anchor or SME firm. This connectivity means that the supply chain is more closely coupled or entangled with the supply of finance. Therefore, TSCF inevitably changes existing relationships, both financing and SC relationships, and such change is central to how the informants understand this connectivity.

Conventionally, two transacting SC members have financing relationships with their own choice of banks. They might coincidentally share the same bank, but there is generally no functional or relational connection between the two arrangements. In other words, the two financing arrangements are completely independent and more confidential, an important consideration given the sensitivity of knowledge about supply chain partners' financing arrangements. With TSCF arrangements, however, the two supply chain members become involved in a triad with a bank (or banks) of the anchor party (i.e. the initiating party, often a large corporate firm), in an indivisible configuration that only makes sense as a whole unit. The minimal unit consists of three required actors ─ a guarantor (the anchor firm, and a supply chain customer or supplier), a beneficiary who receives money from its customer's or supplier's bank (a participating firm, often an SME), and a funder (the anchor firm's bank). The arrangement is agreed by all three parties and based on the attributes of all three, although interestingly the formal agreements (contracts) are made between two discrete dyads rather than among the three parties, as described in the Findings. An authentic TSCF arrangement is not limited to just a three-party configuration, so can be more than three, e.g. tetradic or pentadic configurations, by including other actors such as platform providers or credit insurers as previously discussed in Chapter 2. But the essential characteristic of a TSCF arrangement is that the supply of finance is coupled to a supply chain relationship, so the core category is a distinction between less-coupled and more-coupled arrangements.

In the abstract the dyadic-triadic distinction was stated to be the distinction between independent and entangled structures. Later, in the more detailed treatment in Chapter 5 and then Chapter 6, the starting point for the dyadic-triadic distinction was the difference between a structure of two organisations (for example, bank and supplier) and of three organisations (anchor firm, its bank and its supplier or distributor). However, the number of firms in the

structure on its own was not enough – there also had to be an 'entangling' of the financing relationships (for example, the bank and supplier) with the supply chain relationships (supplier and buyer).

6.2.2 The core category is a way of categorising

The findings have led to a more meaningful way of characterising SCF mechanisms in terms of organisational topology ─ either dyadic or triadic. This proposed new categorisation of SCF has been abductively conceptualised from the collected data on the basis of dyad-triad debates (Wu and Choi, 2005; Wynstra et al., 2015), because informants seemed to make a clear distinction between DSCF (a relationship between an SME firm and its bank), and TSCF (a relationship between an anchor firm, its bank, and an SME firm). This DSCF and TSCF categorisation appears to repeat the definitions of SCF discussed in the literature review, Section 3.4.1, where SCF involves either two or three organisations (Hofmann, 2005; Pfohl and Gomm, 2009; Blackman et al., 2013; Wandfluh et al., 2016). However, unlike typical dyadic and triadic relationships in the supply chain literature, which are principally defined on the basis of whether two or three parties are involved, the key distinction between DSCF and TSCF relationships in this study is based on the cooperation of the anchor firm in providing either a credit guarantee (full or partial), or sharing required information with the external funders, i.e. banks. In this way, TSCF results in the transferring, sharing or mitigation of risk in mechanisms like reverse factoring (RF) and distributor finance.

In the literature there have been various ways of categorising specific SCF mechanisms, which are useful when discussing SCF in relation to when it occurs (i.e. pre and post shipment) (More and Basu, 2013; Wuttke et al., 2013b), what kind of collateral is used (i.e. fixed asset, inventory, accounts receivable, and accounts payable) (Chakuu et al., 2019), who is the provider of

finance and who initiates a SCF arrangement (Babich and Kouvelis, 2018). Nonetheless, these categorisations often overlap and lack a concern with the coupling or entangling involved in different arrangements. The significance of the proposed DSCF and TSCF distinction, as a basic categorisation of SCF mechanisms, is that it points to the central significance of the pattern of inter-organisational relationships to the understanding of members. This Dyadic-Triadic Distinction is clearly different from Martin and Hofmann (2019), who make the connection with prior work on service triads (for example Wu and Choi (2005) and Wu et al. (2010)) only to introduce financial service providers as an important actor.

The other significance of the Dyadic-Triadic Distinction as an important way of categorising SCF schemes is that it highlights how problematic it might be for firms to move from DSCF to TSCF (or even vice versa). Non-anchor firms have to reduce or give up an existing financing relationship to participate in RF, for example. The literature, in general, does not deal with the fact that participating in TSCF involves leaving or at least changing existing dyadic financing relationships, and as the Findings show this was an important concern for the informants.

6.2.3 The core category involves 'grey areas'

The proposed DSCF-TSCF categorisation is useful in drawing attention to the key features of some sophisticated SCF mechanisms that operate in a kind of 'grey area', having a mixture of both triadic and dyadic characteristics. For instance, factoring, which is a DSCF arrangement, appears to have a triadic-like feature as banks have a direct contact with buyers to validate invoices and collect payments. Under the proposed DSCF-TSCF distinction, factoring, despite involving three parties, can be clearly classified as a DSCF arrangement because there is no cooperation in terms of credit guarantees or information sharing from the buyer. In other words, the apparently triadic-like structure of factoring does not involve a cooperative relationship

between the bank and the buyer, and thus is not classified as a true TSCF arrangement. Moreover, risks in factoring are neither transferred, shared, nor mitigated, but rather remain with the SME firm. In the same vein, purchase order finance, which is currently inconsistently described in the literature as either a dyadic (i.e. Tang et al., 2018), or a triadic mechanism (i.e. Tanrisever et al., 2017; Reindorp et al., 2018), can be clearly classified under this new proposed classification as DSCF if the buyer does not guarantee its purchase orders with the bank, or as TSCF if the buyer cooperatively provides guarantees.

TSCF mechanisms are fundamentally triadic. Nonetheless, an apparent exception is dynamic discounting, a common variation of reverse factoring, in which the anchor firm opts to be the funder itself in order to obtain discounts. However, this triadic arrangement needs a platform provider to facilitate the transaction and there is already an external funder (e.g. bank) available should the reverse factoring option be used. This configuration can be seen, for example, in the Early Payment Programmes of The UK government where the government procurement agencies (e.g. City Council, County Council) can choose between using reverse factoring (i.e. banks advance money) or dynamic discounting (the agencies use their own money) to pay their suppliers early. Revenues from discounts are then shared between the bank and the platform provider in the reverse factoring or the government agency and the platform provider in dynamic discounting. The ‘dynamic’ aspect essentially means the earlier the payment, the larger the discount (Global SCF Forum, 2016). Dynamic discounting, as discussed earlier in Chapter 2, is an advanced form of its DSCF counterpart, ‘early payment discounting’, which authentically involves two parties.

6.2.4 The core category provides a thesis

The best way to summarise this research study's thesis is 'Three is a Crowd'. This says that informants construct triadic arrangements as being problematic. Some informants might still find a TSCF arrangement beneficial and thus adopt it. Nonetheless, TSCF seems to be an inherently problematic arrangement compared to a dyadic one. SME firms typically deal with problems of late or extended payments (i.e. filling working capital gaps) by either building relationships with their own suppliers, or entering into DSCF relationships (e.g. invoice discounting, inventory finance, factoring), or both. When firms were offered a TSCF (RF) arrangement, it was not a simple 'participate' or 'do not participate' decision, but rather a decision to move from DSCF to TSCF that was primarily influenced by the need to maintain relationships with the anchor firm as much as to reduce costs. However, this transition from DSCF to TSCF raised many issues: risks of opportunism, loss of control, inflexibility, fear of signalling financial weakness and loss of reputation, creditability or confidentiality. Moreover, TSCF was not an all-inclusive financing option compared to DSCF options, which meant that SME firms still needed to be in a DSCF contract if they decided to participate in an offered TSCF arrangement.

6.2.5 The core category leads to reasons and factors behind (non) adoption

A growing literature on the application and adoption of SCF practices focuses primarily on the focal firm's perspective – i.e. the anchor firm's perspective. In this perspective, it seems to be less true that 'Three is a Crowd'. Several such studies deal with the objectives or reasons to adopt SCF from this perspective (Wuttke et al., 2013b; Liebl et al., 2016; Caniato et al., 2019), suggesting that the primary objective is to extend payment terms (Van der Vliet et al., 2015; Liebl et al., 2016). Some articles indicate that firms want to reduce risk in their supply chains (Caniato et al., 2016; Liebl et al., 2016). Interestingly, a few firms adopt SCF for the purpose

of process simplification (Liebl et al., 2016). None of these reasons appear to apply to SME firms, as the findings in the last chapter indicate, as they do not appear to deal with the significance of the dyadic-triadic distinction.

As discussed at length in Chapter 3, several articles investigate factors influencing adoption: notably the enablers (Liebl et al., 2016; Martin and Hofmann, 2019), and barriers (More and Basu, 2013; Liebl et al., 2016). A wide variety of factors have been identified that influence SCF adoption, including working capital goals (Wuttke et al., 2013b; Iacono et al., 2015; Martin and Hofmann, 2019; Wang et al., 2020), collaboration, both intra-firm and inter-firm (Caniato et al., 2016; Wandfluh et al., 2016), trust (Liebl et al., 2016; Ma et al., 2020), the volume of receivables (Iacono et al., 2015; Liebl et al., 2016; Wuttke et al., 2016; Martin and Hofmann, 2019), interest spread between the focal firm, the initiating firm and its supply chain partners (Iacono et al., 2015; Liebl et al., 2016), and having access to other financing options (Lekkakos and Serrano, 2016; Wuttke et al., 2016; Wuttke et al., 2019). The relative power and size of the focal firm also appears to be an important factor, particularly in facilitating the participation of SME firms in arrangements like reverse factoring (Caniato et al., 2016; Wuttke et al., 2016; Wuttke et al., 2019), and this is often related to dependency between trading partners (Wuttke et al., 2013b; Liebl et al., 2016; Martin and Hofmann, 2019). These findings from the literature have, in part, also been demonstrated in this study (Chapter 5) – particularly the more social concepts concerned with relationships, rather than the technical concepts concerned with financial gain. This is partly because some of these studies, e.g. Liebl et al. (2016); Martin and Hofmann (2019), do extend the scope from anchor firms to suppliers and to finance providers. In addition, earlier studies by Wuttke et al. (2013a) and Wuttke et al. (2019) have shown suppliers as being reluctant to participate in reverse factoring, and others have found that the expected win-win-win benefits are not always experienced (Hofmann and

Zumsteg, 2015; Martin and Hofmann, 2019), especially when involving lengthy payment term extensions. However, overall, there is less emphasis in the literature on the significance of the Dyadic-Triadic Distinction that emerged from Chapter 5, and on the importance of some of the major categories in the Findings, particularly relationships, control and context.

Interestingly, Wuttke et al. (2019) identify and contrast two drivers that can accelerate the supplier's adoption speed: efficiency motives and legitimacy motives. Efficiency motives increase the pace of adoption in the sense of providing access to financing and reducing financing costs. In terms of legitimacy, however, Wuttke et al.'s (2016) findings show that exposure to successful adoption cases can facilitate the supplier's adoption, both by providing a model to copy and by creating a standard to which there may be pressure to conform. The stress on relationships and control in Chapter 5 similarly suggests less concern with efficiency motives. The principle of legitimacy as an important influence is consistent with the findings in Chapter 5, as well as the pressure on less powerful anchor parties to conform. However, the primary legitimacy concern in my findings was a negative one, involving doubts about the accounting treatment of triadic financing.

6.3 Transaction cost theorising

6.3.1 The choice of Transaction Cost Economics (TCE) as a relevant theory

Following a grounded theory approach, no particular theory is committed to before data collection (Glaser and Strauss, 1967; Corbin and Strauss, 2015), in order that theorising is grounded primarily in the data. Once a core category has been established, with major categories showing how actors deal with it, it seems reasonable to make an appropriate choice of major theory, and to examine how findings both fall within, and extend beyond, explanations provided by this major theory. This can then be followed by the development of further theory.

For this particular study, transaction cost economics (TCE) was chosen for several reasons. Firstly, SCF is about finance, so it is natural to look for a theory from economics rather than, for example, organisation studies or sociology. Secondly, the use of SCF is generally justified on the basis of minimising transaction costs, e.g. reverse factoring is a mechanism that supposedly provides suppliers with access to cheaper financing for specific supply chain transactions and, thus, reduces the total costs of the supply chain. Thirdly, although theorising in the SCF literature has been very diverse, as discussed in Chapter 3, TCE is among the theories used most and also one of the four theories recommended for studying SCF (Dekkers et al., 2020). Lastly, on face value, some of the main categories in the Findings are similar to concepts of TCE, including bounded rationality, opportunism, uncertainty, frequency, and information impactedness, and these will be discussed in more detail in the following sub-sections.

The TCE literature is concerned primarily with assessing or identifying governance structures used to mediate the exchange of goods or services (Williamson, 1981a). In this study, TCE is explored as a way to capture how informants assess what are also effectively two governance structures: dyadic and triadic SCF configurations, and their capacities to economise on transaction costs in the financing of the physical exchanges between supply chain members. In the following sub-sections, the use of TCE in the SCF and supply chain management literature is summarised, followed by a discussion of the five main categories that emerged in the Findings ─ Risk, Relationship, Awareness, Control, and Context ─ in terms of compatibility with TCE, identifying what falls within and what extends beyond its explanations.

6.3.2 How TCE has been used in this area

The review of the SCF literature shows that TCE is among the most utilised theoretical lenses. This is, nonetheless, contrary to a review by Jia et al. (2020a), possibly due to the differences in the inclusion criteria applied for their review (the authors include the finance literature). Furthermore, TCE is identified as one of four theories appropriate for examining SCF, together with agency theory, network theory, and social exchange theory (even though social exchange theory has not actually been utilised in the literature) (Dekkers et al., 2020). TCE is adopted in two relevant papers in particular ー Wuttke et al. (2013b) and Martin and Hofmann (2019). Wuttke et al. (2013b) base their analysis of financial supply chain management on TCE, while Martin and Hofmann (2019) adopt TCE as one of four theories used to explain their findings on supply-side SCF application. However, the application of theories in these two papers appears to have limited connection to their findings, in that it is not clear how theory was operationalised in the design and analysis of the studies.

Instead of examining the key concepts of TCE, Wuttke et al. (2013b) argue that SCF relationships reduce transaction costs through the electronic exchange of information and the reduction of cash flow uncertainty. The authors further suggest that ineffective working capital positions in supply chains can increase transaction costs by either limiting production lot size or paying a high interest rate (Wuttke et al., 2013b). Similar to my choice of TCE, their rationale for using TCE is its prediction of the relationship between its factors and transaction costs. The authors also briefly mention that risk in relation to the financial flow of supply chains is influenced by bounded rationality and opportunism. Similarly to Wuttke et al. (2013b), Martin and Hofmann (2019) use TCE to explain the way that financial service providers help reduce transaction costs by facilitating financial information exchange between supply chain members and partners. In addition, TCE in their view helps explain the selection of external

SCF financing when there are working capital conflicts between the trading partners (Martin and Hofmann, 2019).

Both papers have had to use additional theories, demonstrating that TCE alone may not offer an adequate explanation of the SCF adoption decision. Wuttke et al. (2013b), despite starting with TCE, add resource dependence theory to help explain their finding of 'dependence'. Martin and Hofmann (2019) use a contingency approach and embed three more theories within it, including TCE, in order to explain their findings. For example, they use social exchange theory to explain relational factors such as trust and dependence in SCF relationships. However, in this thesis, rather than using many theories I try to show in depth what TCE can explain and what it cannot explain (see Sections 6.3.3 and 6.3.4) and then propose further theorising in Section 6.3.5.

Beyond the supply chain finance literature, TCE has been used extensively in operations management and supply chain management more generally in several ways. Its primary use concerns outsourcing (Ellram et al., 2008; Williamson, 2008) and make-or-buy decisions (Walker and Weber, 1984; Cánez et al., 2000), sustainability (Carter and Rogers, 2008), and supply chain risk management (Blome and Schoenherr, 2011). In addition, TCE has been employed in the analysis of strategic and organisational matters (Ghoshal and Moran, 1996), including vertical integration (Williamson, 1986; Gulbrandsen et al., 2009), and international expansion (Anderson and Gatignon, 1986; Zacharakis, 1997), strategic alliance (Parkhe, 1993; Judge and Dooley, 2006), as well as for choosing an optimal financial structure (Williamson, 1991; Balakrishnan and Fox, 1993). TCE has also been used in relation to financing generally. According to Williamson (1991), financial instruments such as leasing, debt financing, and equity financing are 'instruments of governance', where firms need to make similar decisions

to the more prevalent make-or-buy decisions. While leasing and debt financing are market forms of corporate finance, equity is a hierarchical form, with the choice between them essentially based on considerations of the specificity of assets involved (Williamson, 1991). Among the three forms of governance, leasing is the simplest while equity financing is the most complicated (Williamson, 1991). Williamson did not, however, extend the discussion to the more interesting forms of SCF, such as reverse factoring.

Perhaps the most significant point in this work is that, in all the supply chain applications of TCE, the authors have needed to extend or enrich TCE in some way. In the following two sub-sections (6.3.3, 6.3.4), I explore the findings from my study, in Chapter 5, that either clearly support TCE, or that TCE cannot account for.

6.3.3 Findings consistent with TCE

According to Williamson (1973; 1975; 1979; 1981a), there are two types of factor: 1) human factors (behavioural assumptions), which are bounded rationality and opportunism; and 2) environmental/transactional factors, comprising information impactedness, uncertainty, frequency and asset specificity. The first, bounded rationality, is concerned with the fact that human actors are less than completely capable in calculation (Williamson, 1981b). This bounded rationality prevents full appreciation of the risk and reward of the choices they make on issues such as SCF. The second factor, opportunistic behaviour, is defined as "self-interest seeking with guile" (Williamson, 1975, p. 9), and this risk of opportunism may increase under conditions of uncertainty. The third factor, information impactedness, occurs where there is information asymmetry ─ when one party has better information than the other party and when it is costly to achieve information symmetry (Williamson, 1973). Fourth, uncertainty, is defined as a condition in which "it is very costly, perhaps impossible, to describe the complete decision

tree."(Williamson, 1975, p. 23). Fifth, frequency, refers to the frequency of transactions between specific trading parties. Lastly, asset specificity refers to assets that are specific to a relationship and therefore have little or no value in other supply chain relationships (Walker and Weber, 1984).

Key TCE concepts chosen in the focus group study of Dekkers et al. (2020) to identify theories for SCF research are bounded rationality, opportunism, and asset specificity while the recent paper by de Goeij et al. (2021) added the fourth concept of transactional frequency. I chose to apply both of the behavioural assumptions of TCE, which are bounded rationality and opportunism, and its three transactional attributes, uncertainty, asset specificity, and frequency. Given the findings, it makes sense to add information impactedness, which is also introduced by Williamson. Therefore, the remainder of this section is structured according to six factors of TCE, namely bounded rationality, opportunism, information impactedness, asset specificity, frequency, and uncertainty, applying them to the concepts that have emerged from the data analysis, i.e. the five main categories Risk, Relationship, Awareness, Control, and Context that emerge in Chapter 5.

6.3.3.1 Bounded Rationality

Bounded rationality is evident in various categories of the findings. Under Relationships, items coded under Trust in Relationships and Relationship Longevity indicated that a firm often could not predict or calculate how another party would behave and thus relied on the other's trustworthiness. This meant, for example, retaining a dyadic finance relationship, rather than entering a triadic relationship involving an unknown finance provider.

For Awareness, items coded under Awareness as Promotion showed that sometimes awareness came from what was essentially an attempt to sell SCF by the anchor firm. This meant it was not just informing people but potentially withholding information. This was important because smaller firms often knew less about SCF, in particular TSCF. This is related to information impactedness, dealt with below, and the result is bounded rationality on the part of those receiving such promotion. Similarly, items under Impediments to Awareness indicated that Divisionalisation in organisations sometimes meant that parts of an organisation were ignorant about SCF possibilities, again implying bounded rationality.

Under Control, items under Complexity suggested a difficulty for some firms in fully understanding or knowing about SCF mechanisms, particularly TSCF – another case of bounded rationality.

6.3.3.2 Opportunism

Due to their smaller size, SME firms are often subject to opportunistic bargaining (Williamson, 1975) by the corporate-sized anchor firm. Several categories fit the general concept of opportunism. Under Control, all three concepts under the sub-category Manipulation demonstrate that participation in TSCF introduced partner opportunism in which SME firms were prone to supplier exploitation. Ex-ante opportunistic behaviour of the anchor firm was evident in prolonged payment term extensions imposed in a move to TSCF arrangements. It is also evident that one of the SME firms felt pressured to participate in a TSCF relationship. This reiterates findings from others that buyers use their power to pressure their suppliers to participate in RF (Wuttke et al., 2013b; Liebl et al., 2016). Furthermore, being offered or introducing TSCF late in contract negotiations, after concluding the price negotiation, was perceived by SME firms as opportunistic behaviour.

For Relationships, a concept of Bargaining Power under Power in Relationships creates the possibility of opportunistic behaviour in a supply chain relationship prior to any financial relationships. This raises concerns of a likely form of opportunistic behaviour, i.e. forced renegotiation (Wathne and Heide, 2000) where the anchor firm might renegotiate the discount rate, payment terms, and price reduction. Consequently, this could discourage SME firms from participating in TSCF arrangements.

6.3.3.3 Information Impactedness

Several specific categories from the findings fitted the general concept of information impactedness. Under Relationships, Trust in Relationships categorised items saying that in trustful relationships partners were willing to share bad news. For example, borrowers informed banks when they had issues that may result in an inability to repay the loan. Such relationships were characteristic of DSCF but not TSCF, indicating TSCF was more vulnerable to information impactedness.

Under Awareness, the sub-category Awareness as Signalling included items that expressed concern about indicating financial weakness to other parties. In particular, SME firms were afraid of signalling the use of financing that the anchor firm did not yet know about, suggesting information impactedness unfavourable to anchor firms. Items under both Awareness as Promotion, and Responsibility for Awareness, indicated that SME firms would know less than anchor parties about TSCF in particular, suggesting information impactedness unfavourable to non-anchor firms (as well as being a feature of bounded rationality). The last sub-category is Awareness in terms of Transparency, where banks wanted to capture the full flow of supply chain information, both physical and financial, to get a better picture of the underlying (credit) risks and be able to provide a holistic SCF solution. Banks can reduce transaction costs and

risks by acquiring information from the anchor firm about the non-anchor firm. Thus, TSCF can serve as a mechanism to mitigate informational impactedness unfavourable to banks by giving them more visibility into supply chain activities and transactions. However, TSCF also increased information impactedness in the sense that the issue of Price Discrimination was due to a lack of transparency in the price of TSCF. This was individually determined by the anchor firm for each SME firm it offered finance to, and SMEs would be unaware of the prices offered to other suppliers.

For Control, items under the sub-category Confidentiality showed that parties expected other parties not to know things that are relevant, such as their financial status, mainly for credibility reasons, but sometimes for legal reasons. For example, banks could not inform SME firms that their corporate customers were offering TSCF.

Under Context, the Nature of the Business was sometimes important. The construction sector had a practice of payment retentions that reflected an information asymmetry between contractors and major constructors. Retentions meant that banks were reluctant to provide DSCF in the form of invoice discounting, whereas TSCF solved this by guaranteeing payment when invoices were approved. Also, the sub-category of Legitimacy included items about the use of TSCF for off-balance sheet financing, indicating the way it facilitated information asymmetry between anchor firms and anyone needing to understand the firm's financial health – investors as well as potential supply chain partners. TSCF meant that anchor firms could effectively take on debt in the process of offering RF to suppliers and increasing their accounts payable without showing this as debt in their accounts.

6.3.3.4 Asset Specificity

Under Relationships, a concept under the sub-category Relationship Longevity, Contractual Lock-in in a DSCF relationship, can be related to the notion of asset specificity in terms of post-contractual dependency (Lonsdale, 2001). Here, SME firms appeared to be locked into a relationship as leaving it could incur a high switching cost (Williamson, 1975; Amit and Zott, 2001), such as termination and penalty fees. This Contractual Lock-in effect of DSCF arrangements may hinder the move to participate in TSCF relationships. The main form of asset specificity in DSCF relationships, however, seems to be human asset specificity, especially for small firms that often lack expertise in dealing with SCF. In addition, a concept under the sub-category Transition in Relationships, Using Both DSCF and TSCF concurrently, indicates the need for SME firms to keep both DSCF and TSCF arrangements in place since TSCF arrangements are highly specific. Even though investment in terms of physical assets may not seem very high, it can be significant for small firms. In particular, specific investment in terms of human assets when using two systems simultaneously can be burdensome for many SME firms.

For Control, a concept under the Complexity sub-category was Lack of Standardisation, where each TSCF arrangement appeared to have its own system, e.g. SCF platform, which is often highly specific. This specificity is due to both physical and human asset features. Since a TSCF arrangement is only applicable to one anchor firm, there is a possibility that SME firms may participate in TSCF with more than one anchor firm. This means using multiple systems where training is needed and using SCF platforms that are specific to each TSCF arrangement at the same time.

6.3.3.5 Frequency

A concept of Discounting Options, under the Flexibility sub-category of Control, shows the differences between DSCF and TSCF regarding options to sell invoices. On the one hand, DSCF arrangements offer three options: one-off (e.g. spot factoring), intermittent or seasonal (e.g. selective invoice discounting or factoring), and continuous or recurrent discounting (e.g. conventional invoice discounting or factoring) that allow SME firms to sell a single invoice, a batch of invoices from one customer, or a whole sales ledger, whenever needed. On the other hand, participating in a TSCF arrangement, SME firms can choose between an occasional recurrent facility, referred to as selective discounting (i.e. selectively sell approved invoices), and auto-discounting (i.e. always sell approved invoices), respectively. Thus, in terms of discounting options, both DSCF and TSCF provide choices about transaction frequency, so transaction frequency is relevant to how they are used, but is not a central factor distinguishing dyadic and triadic mechanisms. However, the choice of frequency in TSCF is most likely dictated by the anchor firm in contrast to DSCF that SMEs may choose the option themselves.

6.3.3.6 Uncertainty

Under Control, a concept of Commitment under the Flexibility sub-category is concerned with whether the SCF practice is committed or uncommitted. A committed SCF will typically not be terminated by banks except under pre-determined conditions and agreements, whereas under uncommitted SCF a bank can, at the bank's absolute discretion, decide whether to buy invoices or terminate the contract at any time. Grüter and Wuttke (2017) assert that the true value of RF is its flexibility where SME firms can selectively discount the approved invoices. However, this also means uncertainty is greater compared to conventional DSCF, since the anchor firm or its bank can terminate the arrangement at any time. DSCF facilitates relationships due to the frequent contact between SME firms and banks, which leads to long-term relationships in which one-or two-year contracts become regularly renewed. By factoring their receivables on

a regular basis, SME firms have access to ongoing, predictable cash flow. Selective invoice discounting or spot factoring, which are uncommitted options of DSCF mechanisms, pose high uncertainty similar to TSCF arrangements where banks are not obliged to buy the receivables. Generally, the informants' concern with Control, as well as various types of Risk, indicate the relevance of uncertainty to their understandings of SCF.

To summarise this discussion of TCE's relevance, Table 6-1 draws together the findings that fall within TCE according to the five main categories and their concepts (sub-sub-categories).

Table 6-1 Findings within TCE

Main category from the findings	**Concept (i.e. Sub-sub-category from the findings)**	**Where findings come within TCE**
Relationship	Not Always Cheaper Than DSCF	Bounded rationality
	Complexity of TSCF Relationships	
	Bargaining Power	Opportunism
Awareness	Deceptive Signalling	
Control	In Exchange for Prolonged Payment Extensions	
	Pressured to Participate	
	Offering later (after price negotiation)	
Risk	Syndicates	Uncertainty
	Trade credit insurance	
	RF (UK and Thailand)	
Control	Commitment	
Relationship	Contractual Lock-in	Asset specificity
	Using DSCF and TSCF Concurrently	
Control	Lack of Standardisation	
Relationship	Damaging Existing DSCF Relationships	Frequency

Main category from the findings	Concept (i.e. Sub-sub-category from the findings)	Where findings come within TCE
	(Increasing Financing Costs of Existing DSCF Relationships)	
Control	Discounting Behaviour	
Awareness	Promotion to Raise Awareness	Information impactedness
	Not Being Widely Publicised-	
	Who should be responsible?	
	Divisionalisation – contribute to information asymmetry	
	Client Confidentiality - contribute to information asymmetry	
	Vulnerability Signalling	
	Signalling Credibility	
	Providing a Nice Audit Trail	
	Transparency through Collaboration	
	Price Discrimination	
	Over-pricing TSCF	
	Two Separate Agreements	
Control	Disclosure of Financing Used	

6.3.4 Findings beyond TCE

Prior literature has for a long time referred to the limitations of Transaction Cost Economics. For instance, TCE has been criticised for its under-socialised views in which human actions and motivation are ignored (Granovetter, 1985), and an over-socialised view of institutional force (North, 1986) that ignores human initiative and originality. To enhance the explanatory power of TCE it is therefore crucial to embed the social context in which economic activities occur (Bruin and Dupuis, 1999). In line with this literature, some of the main categories in the Findings indicate that to explain understandings of, and decisions about, SCF adoption there is

a need to go beyond TCE. TCE primarily assumes that firms make decisions based purely on an economic rationale. The Findings show that SME firms in fact made decisions on the basis of not only economics, but also relationality, for example. In the remainder of this sub-section, the findings that go beyond TCE are organised under the headings of Relationship Matters, Control Imperative, Contextual Embeddedness, and Signalling Concerns. These are closely related to the main categories of Relationships, Control, Context, and Awareness (Chapter 5), but they are not identical as some observations in these main categories were consistent with TCE, as indicated in the previous section.

6.3.4.1 Relationality Matters

SCF arrangements involve two distinct relationships ─ financial and SC relationships. While conventionally and traditionally firms keep these relationships disconnected through the use of DSCF arrangements, an attempt to integrate or connect the two relationships using a TSCF arrangement aims to reduce transaction costs and possibly to mitigate risk and enhance supply chain relationships. But this leads to several implications, especially for the SME firm. In the findings, concepts such as Maintaining Relationships and Damaging Existing DSCF Relationships (Increasing Financing Costs or Causing Termination of Existing DSCF Relationships) indicated how meeting a supply chain requirement (for example, signing up to a customer's RF offer) damaged a financial relationship (a long term DSCF relationship with a bank). The dilemma is then between the importance of longevity in the physical supply chain relationship, compared with longevity in the financial supply chain relationship, as indicated under the Relationship Longevity and Transition in Relationships sub-categories.

6.3.4.2 Control Imperative

The sub-category of Confidentiality under Control indicated how important it was for informants to avoid supply chain partners knowing about their financing arrangements. SME informants did not want their customers to know they were financing their invoices, and in one case this meant the supplier declining a TSCF offer and maintaining its DSCF arrangements. Confidentiality is not an explicit concept in TCE, although it could be linked to opportunism indirectly, in the sense that signalling weakness could indirectly induce opportunistic behaviour by another party. As indicated in Section 6.3.3, there were sub-categories of Control, such as Complexity that did fall within TCE, particularly its use of Asset Specificity.

Another important aspect of Control Imperative is concerned with the need for invoice approval and lead time for the approval. Although part of this sub-category has a link to the concept of Uncertainty as discussed previously in Section 6.3.3.6, the key informants' concern is the 'transfer of authority', which is not related to any specific uncertainty (they are guaranteed payment in triadic schemes), but more to the need to have power and capability within oneself, particularly as a small business. Participating in TSCF arrangement involves SMEs giving up or transferring a certain amount of authority to the anchor party.

It is important to say, in relation to a concept like uncertainty, that the informants' stress on control is both within and beyond TCE – there is no clear boundary – because some elements of uncertainty are related to specific transactions, and contribute to the idea of a transaction cost, whereas other elements of uncertainty are more general, related to the status of a firm or its supply chain.

6.3.4.3 Contextual Embeddedness

There are several aspects of context that appear to go beyond TCE. First, there were concerns with Legitimacy as an aspect of Context. One was the issue of the accounting treatment of TSCF on the part of the anchor party. As described in Chapter 5, one TSCF scheme had to be discontinued because the accounting legitimacy of RF was a concern, in relation to off-balance sheet financing. This probably arose around the time that the Carillion scandal became public knowledge (in January 2018). Another important aspect of the Legitimacy sub-category was the way that TSCF practices were legitimised as a way of ensuring SME suppliers were paid on time. Yet, as indicated in the Findings, some informants indicated that this led to very long payment terms. Although suppliers got paid on invoice approval, they had to pay interest for long periods for the money they were owed.

Under the Regionality sub-category there was an observation that in different regions there were different initiators of TSCF in particular, connected to competitiveness in the finance industry and local legislation. In line with the literature, the anchor firm was an initiator of a TSCF arrangement in the UK. This was not the case in Thailand where banks took an initiating role. So firms do not just decide whether or not to adopt SCF, whether by thinking about transaction costs or anything else: there has to be an initiating party to create the possibility of SCF, and this might not even be a supply chain member.

Under Culture, an issue was the difference between one-bank-only cultures in the UK and cultures where firms used different banks for different transactions, such as in Thailand. These cultures can enable or inhibit TSCF participation. For instance, SME firms in the UK appeared to have difficulties changing or moving banks, despite being incentivised to do so, while their Thai counterparts had no issue shopping around for a better deal.

Under Nature of Business, an example was how the construction industry could not use DSCF mechanisms because of the practice of retentions, so TSCF approaches appeared to be more suitable. Thus, specific aspects of the industrial context, particularly the practices of a certain sector, could be decisive in determining an appropriate SCF mechanism.

There are contextual issues that potentially could be part an explanation within TCE, such as sources of uncertainty that are shaped by region. However, TCE does not have a general concept of context, particularly of legitimacy and legality, yet these are clearly important to the way firms understand and make decisions about SCF.

6.3.4.4 Signalling Concerns

TCE does not have a particular concept of signalling: i.e. of communication where one party communicates an unobservable quality to another via some observable quality (Connelly et al., 2011). Yet both intentional and unintentional signalling was important to informants. One example was that a supplier accepted a TSCF arrangement in order to signal their willingness to maintain a long term supply chain relationship, but at the same time withdrew money from the facility at the normal payment term (instead of immediately on invoice approval) in order to signal that they were strong enough not to really need the financing as early as it was available in TSCF (i.e. Signalling Credibility). The signalling issue is strongly connected to the concept of Relationality Matters, because the signalling of financial vulnerability arises when the physical supply chain becomes entangled with the financial supply chain, as in TSCF.

The way TSCF is promoted was evidently an attempt to signal that the anchor party had a concern for the welfare of SMEs. This was seen as Deceptive Signalling to some informants, who believed the anchor party's true intention was either to extend its payment terms or to

avoid borrowing being shown on its balance sheet. Signalling was also evident in material about the Carillion scandal, where the anchor party was probably trying to signal to the government and public that it was caring for its supply base (as stated in its Annual Report).

To summarise the way the findings from Chapter 5 appear to go beyond transaction cost theorising, Table 6-2 draws these together according to the five main categories and their concepts (sub-sub-category).

Table 6-2 Findings beyond TCE according to the five main categories and concepts

Main Category in the findings	**Concept (sub-sub-category) from the findings**	**What takes the findings beyond TCE**
Relationship	As a Trusted Advisor (Like a Marriage) vs. Distrust	Relationality Matters
	Collaborating with Suppliers (e.g. Securing Stock, Hedging Price)	
	Online banking vs. Personal banking relationships	
	Long-term DSCF Relationships	
	Long-term SC Relationships Maintain Relationships	
	Damaging Existing DSCF Relationships (Increasing Financing Costs of Existing DSCF Relationships)	
	Damaging Existing DSCF Relationships (Causing Termination of Existing DSCF Relationships)	
	As a Pre-Condition	
Risk	Self-reliance	Control Imperative
	Diversification (Debt Concentration)	
	Double Financing	
	Retain Control of Payment Collection (Invoice Discounting)	
Awareness	Transparency through Collaboration	
Control	Authority and Availability (i.e. Need for Approval, Withdrawn Amount, and Lead Time)	

Main Category in the findings	Concept (sub-sub-category) from the findings	What takes the findings beyond TCE
	Size of SCF Facility	
	Peace of Mind	
	Disclosure of Financing Used	
Awareness	Who is responsible?	Contextual Embeddedness
Context	Size, Sectors, and Years of Establishment	
	Single vs. Multiple Banking Relationships	
	Variants of TSCF in Thailand	
	TSCF is Non-ubiquitous	
	Level of Sophistication	
	Seasonality	
	Competitiveness	
	One Bank Only (UK)	
	Culture of Late Payment	
	Government Initiatives	
	Legality	
	Accounting Treatments	
	Off-balance-sheet Financing	
Risk	Sectoral Preferences	
Awareness	Deceptive Signalling	Signalling Concerns
	Vulnerability Signalling	
	Signalling Credibility	

All in all, it can be seen that among the five main categories, almost all concepts under Awareness come within TCE, except Awareness as Signalling, while all concepts under Context go beyond TCE. The remaining categories of Risk, Relationship, and Control contribute both within and beyond TCE. For instance, under the Control category, the sub-

category of Flexibility, which is identified as a coping mechanism against uncertainty (Stevenson and Spring, 2007; 2009), falls well within TCE, where uncertainty is one of the main factors. Nonetheless, some concepts under the Flexibility sub-category, such as Authority and Availability and Peace of Mind, fit better with the Control Imperative aspect that goes beyond TCE.

Using TCE deals with four main issues. The first is the need to connect with the existing literature (as indicated in Grounded Theory). The second is the need to deal with the way in which the findings are partly about transactions (either in dyadic or triadic structures), and involve economic considerations. The third is that using TCE helps package the transactional parts, and helps identify the parts that are not transactional (and which then go into the model in Chapter 6). Lastly, TCE components look relevant to the problems encountered in going from dyadic to triadic arrangements (as also discussed in Chapter 6) – uncertainty, opportunism, and information impactedness.

6.4 Further theory development

The process of theory generation followed grounded theory, and so involved data collection and concurrent analysis. This was then connected with existing theory, and at this point TCE was introduced. Further theorising then took place, to get beyond TCE's explanation of the data. Therefore, TCE supports the theory generation by introducing theory from previous work, and by clarifying how the findings built on and went beyond previous work, as a starting point for the final theorising. Using TCE also helped demonstrate that TCE on its own is not enough to explain the findings that evidently include several non-transactional factors.

In this section, I use the observations from the previous section about findings beyond TCE to develop a model explaining the 'three is a crowd thesis', i.e. how actors consider the movement between dyadic and triadic SCF schemes to be problematic. The essential point from the core category is that, in TSCF, the physical and financial supply chains become entangled: a firm receives funding from the anchor party's bank, not its 'own' bank. There is a transfer of authority, since in dyadic schemes the supplier can initiate and control their working capital financing arrangements, whereas in triadic schemes there is a transfer of authority to the corporate anchor firm. This has important consequences, for example that a supplier reveals its financial status and its use of working capital finance to its supply chain customer. However, as suggested in the previous section, the way actors make decisions is based on several considerations that go beyond TCE: relationality matters, contextual embeddedness, control imperative and signalling concerns.

Figure 6-2 illustrates a model in which there is a move from a dyadic scheme, in which supply chain members have independent relationships with their finance providers, to a triadic scheme with a specific anchor party. In practice, SME firms will often have to maintain both dyadic and triadic arrangements, as discussed in Chapter 5. In this figure, the dotted lines simply show inter-firm relationships, whereas the solid lines show flows of supply chain finance. The figure is intended to convey 1) the way that adopting TSCF has to involve a process of transitioning out of DSCF, 2) that this process involves an 'entangling', whether upstream or downstream, and 3) that this process is moderated by a set of considerations that go beyond transaction cost concerns.

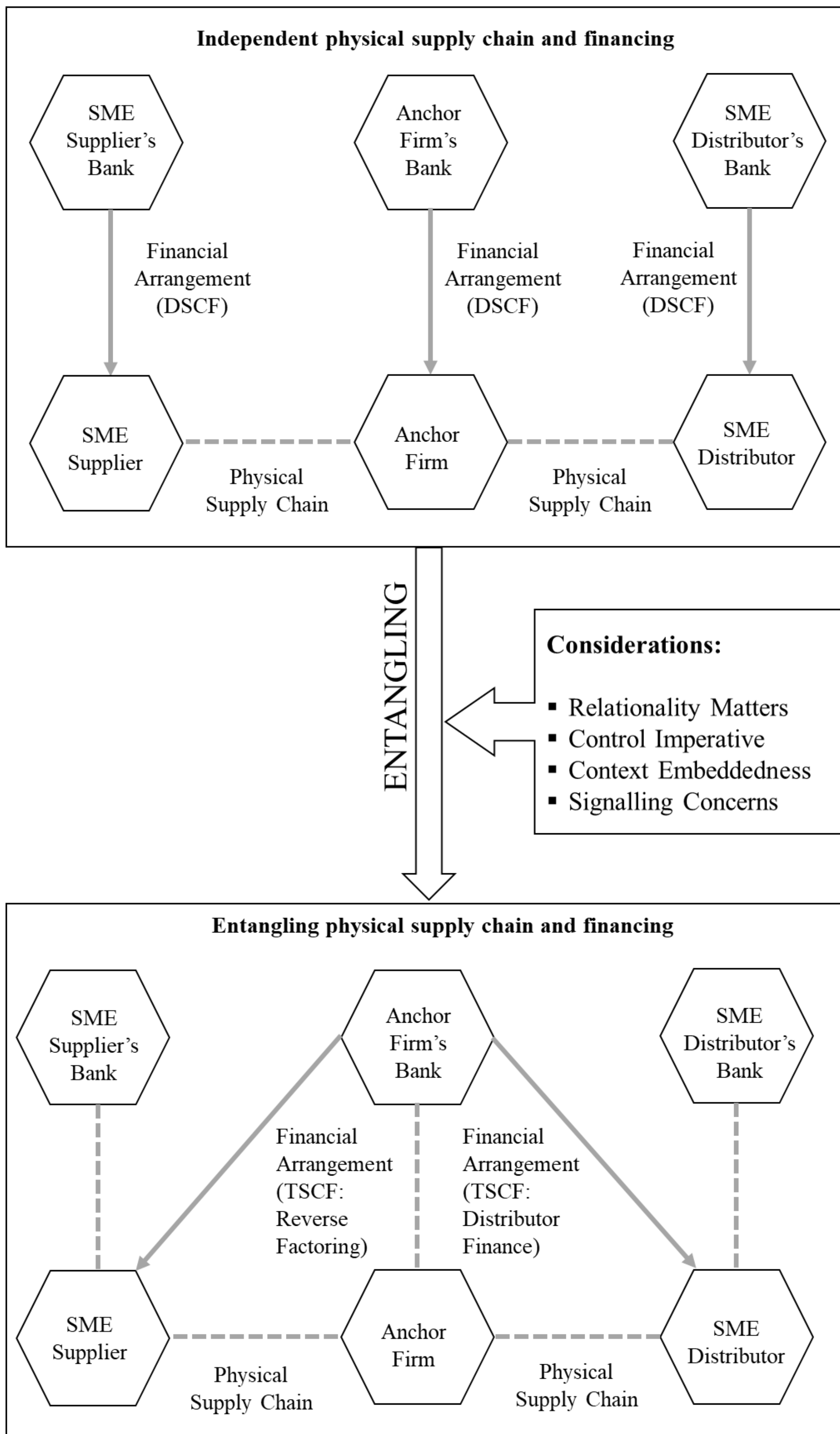

Figure 6-2 Dyadic-Triadic transition

There are four points to make in connection with the model:

1. The literature emphasises lack of awareness and knowledge (More and Basu, 2013) and this essentially falls within TCE explanations and the idea of bounded rationality. But the signalling element in the model goes beyond this. It deals with types of awareness that are not simply about actors knowing about the technicalities of SCF but also includes, for example, concerns among SMEs of how they signal financial weakness to anchor firms. And it deals with implicit rather than explicit communication.

2. The context element can arise at several levels: the external society, e.g. cultural and legal issues; the nature of the industry, e.g. whether it is a construction supply chain; the nature of the business, e.g. its seasonality; and even the nature of the firm and its manager(s), e.g. an owner manager's entrepreneurial mindset.

3. The model is not dismissing the relevance of TCE, but saying the informant's views and decisions have more complex origins, e.g. declining an RF offer can be due both to an anchor firm's opportunism (an explanation within TCE) but also concern about maintaining relationships (an explanation beyond TCE).

4. Financing cost, which the literature (and essentially TCE) focuses on, ends up not being very important to suppliers as this cost is generally recovered in a firm's price. The findings broadly seem to indicate that other considerations dominate, like maintaining control and relationships.

In the following diagram, a more detailed view of the signalling issue is given because it is this issue which seems, subjectively, perhaps the most interesting and worth developing further. There are very few papers within the SCF literature (e.g. Song et al., 2020) that refer to the signalling that arises from a firm's position in a supply network, but generally signalling is not discussed in the SCF literature. Figure 6-3 captures the signalling that occurs within SCF relationships, in both dyadic and triadic forms. All of the signals show whether they are intended or unintended, indicating what the sender of the signal believes the signal means. In some cases, where this is evident, I also show at the other end of the arrow what the signal means to the recipient. Not every case is like the situation shown in the figure, of course, and it combines the views of multiple informants. For example, one of the informants wanted to signal financial strength by declining RF; another informant wanted to signal financial strength by accepting but withdrawing funds only after the normal payment term. The point is that firms pay attention to signalling implications within existing and potential relationships when considering SCF. Some of the items are based directly on the data and some on further interpretation. For example, the unintended signal that an SME firm has credibility because it has been selected to participate in TSCF was implied but not stated explicitly by the informants.

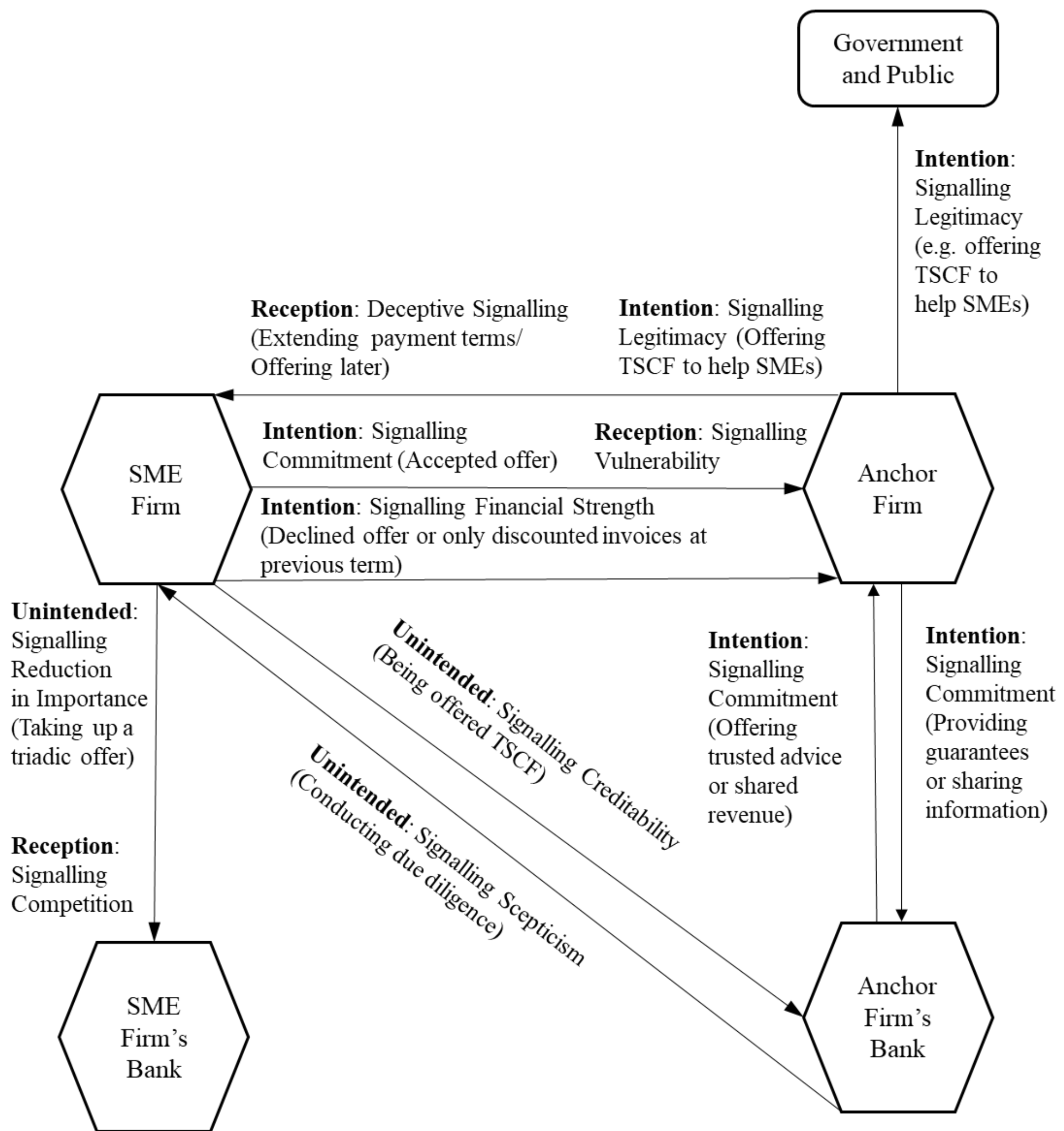

Figure 6-3 Signalling model

6.5 The most recent literature

As mentioned in Chapter 3, there are five articles that emerged in the literature after the first draft of the thesis was complete. This section briefly examines the relevance of these.

The closest is a paper by de Goeij et al. (2021), "Understanding SME suppliers' response to supply chain finance: a transaction cost economics perspective", which focuses on the perspective of SME suppliers, and the application of TCE. This demonstrates the interest that is emerging in this issue. The paper examines how TCE factors affect SME suppliers' decision to adopt RF specifically. Among the four factors, the authors find that bounded rationality and opportunism appear to help explain the misalignment between the financial attractiveness and the acceptance of the RF offer, whereas asset specificity and frequency seem to play an insignificant role in the decision making of SME suppliers.

De Goeij et al.'s (2021) paper differs from my study in three ways. First of all, the authors use a case study approach where TCE factors only are used to code the data, while my study employed Grounded Theory in data collection and analysis and subsequently showed where TCE applies and does not apply to the findings. Secondly, my study examines the understanding and adoption decision of SMEs both as suppliers and buyers of the anchor firm, whereas de Goeij et al. (2021) only focus on the adoption decision of SME suppliers. Looking both upstream and downstream meant that I could identify the significance of the Dyadic-Triadic Distinction as a general property of SCF arrangements, whether they were for suppliers or for distributors. Lastly, de Goeij et al. (2021) mention triads to highlight that there are three parties in RF arrangements, which is similar to the introduction of the idea of a triad of buyer-supplier-financial service provider in Martin and Hofmann (2019). In contrast, TSCF in my study is a minimum, indivisible unit of SCF relationships where the anchor firm either provides guarantees or shares information with the funder. What defines a triadic arrangement, for me, is therefore that all three parties have a relationship with the other two, not just that there are three parties in a network.

The second paper by Banerjee et al. (2021) concerns just reverse factoring and suppliers specifically. It is quite close to my work as they also look at suppliers' adoption decisions. They also find similar results, in that they show the importance of issues like fairness, not just cost, and point to the potential importance of information asymmetry. Their method is experimental, using RF offers with different characteristics to determine the importance of these characteristics, and is therefore based on a prior expectation of what the relevant characteristics are; and the experimental subjects appear mostly to be individuals who do not deal with working capital decisions in practice.

The study by Guida et al. (2021) looks at relationships between a buyer and supplier, focussing on upstream SCF only, looking specifically at buyer-led (i.e. what I have termed triadic) schemes. They consider in particular the bargaining power and transaction volume in these relationships. The study, using expert informants, involves the development of a model to help the buyer choose which SCF solution to use, based on these characteristics for a specific supplier. So, it is work that clearly emphasises the buyer's perspective, examining only a limited range of potential influences on SCF adoption. My work in contrast is intended as a grounded, so open-ended, investigation of how actors deal with the adoption of any kind of SCF.

The fourth paper by Kouvelis and Xu (2021) presents an analytical modelling study, comparing two schemes – factoring and reverse factoring. The model indicates that in some circumstances reverse factoring might not be preferable, and that when buyers demand long payment term extensions there is indifference between the two schemes. This looks relevant in the sense that it is comparing what I have called a dyadic and triadic scheme, but in terms of the issues I found important, like confidentiality, these two schemes are in fact very close. The study echoes the point that reverse factoring may still be appropriate for the buyer without an interest

rate advantage – a situation one of the participating companies was in (because the company had been in a long-term dyadic relationship). But it does not deal with other ways in which reverse factoring becomes problematic, and the way in which RF might have been adopted under pressure.

Lastly, Zhang et al. (2021) investigate purchase order finance. In practice this is what I would term dyadic, and is similar to factoring, but the collateral is a purchase order rather than an invoice. The purchase order is confirmed with the buyer, but the finance is not guaranteed by the buyer. Based in China, the finance provider is a non-bank institution with a more complex relationship with the supplier, however, and therefore has extensive social interaction and information system integration. Their study examines the effect of these on the decision of the finance provider to offer purchase order finance – but it does not deal with other forms of SCF, or the supplier's adoption decision.

Overall, these studies do have relevance to this research, but none appear to take a unified view across upstream and downstream arrangements, and none deal with the dynamic issue of having to move from one form of financing to another when adopting a scheme like RF. They do not adopt grounded theory-based approaches, so generally concentrate on particular sub-sets of factors relevant to the adoption decision, rather than trying to get a more comprehensive view of these factors. It is important to acknowledge, however, that de Goeij et al. (2021) in particular manage to carry out some of their fieldwork across complete SCF triads, which I was unable to do.

6.6 Conclusion

This chapter discusses the core category: the Dyadic-Triadic Distinction, and the thesis of this research study ─ that 'Three is a Crowd' ─ in the context of the current literature. This is followed by a discussion of the compatibility of the findings with transaction cost economics. The last section presents a proposed model, as well as a signalling model, which help to explain the 'Three is a Crowd' thesis. The chapter also summarises and discusses the most recent literature. The next chapter presents the conclusions of this study, including a summary of key findings, contribution to knowledge, and practical implications. The limitations of the study are discussed, with suggestions for further studies.

Chapter 7 Conclusion

7.1 Introduction

The previous chapter discusses the core category – the Dyadic-Triadic Distinction – and the thesis of this research study – that 'Three is a Crowd' – in relation to the SCF literature. The five main categories of Risk, Relationship, Awareness, Control, and Context led to further theorising with transaction cost economics to explain informants' understandings of the core category. A model based on the findings that appeared to go beyond TCE was developed to summarise these understandings. The rest of the chapter contains a further seven sections as outlined in Figure 7-1, starting with addressing the research questions, both initial and emergent. This is followed by a summary of key findings and their significance. The two subsequent sections present the contributions to knowledge this study has made, as well as its practical implications. Limitations of the study and opportunities for future research are then discussed. The last section summarises the chapter.

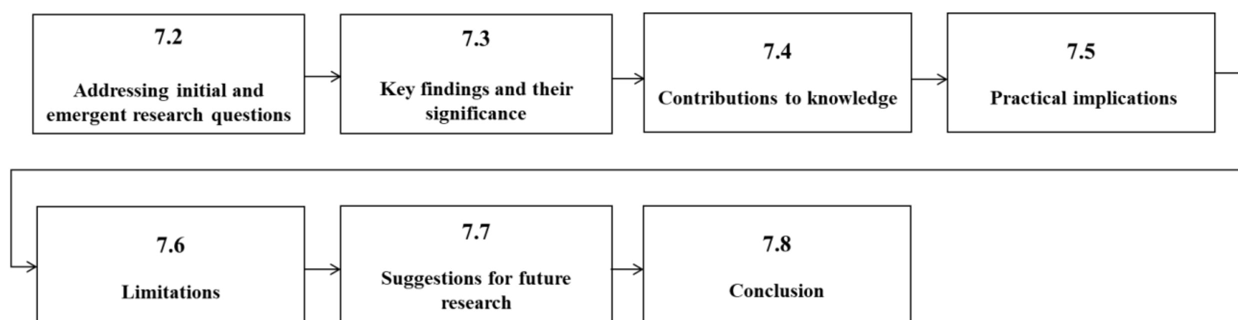

Figure 7-1 Flow of Chapter 7

7.2 Addressing initial and emergent research questions

After a very broad review of the literature, I entered the field aiming to explore four main topics: supply chain relationships, payment terms and working capital gap management,

financing options in use, and reverse factoring in particular. The initial research question, as outlined below, was framed quite specifically, aiming to understand why small, non-focal firms in supply chains, typically SME suppliers to a corporate focal firm, appear hesitant to adopt SCF, especially the fairly new form of SCF known as reverse factoring:

What impedes the adoption of reverse factoring (RF) from the supplier's perspective?

The first interviews with eight SMEs, three banks, and one subject expert (all in the UK) indicated that SMEs talked and understood more about invoice discounting, factoring, and inventory finance than about reverse factoring. Although this low awareness of reverse factoring is evident among SMEs, it is only stated once by More and Basu (2013) in their study of an Indian firm. Perhaps more surprising, and not found in the literature, was that this low level of awareness existed not only among SMEs, but also among bank managers and certain subject experts. Based on this fieldwork, and on reading the grey literature and related literature on supply chain management, entrepreneurship, accounting and finance, I abductively coined two terms as first conceptual categories ─ Dyadic SCF (DSCF) and Triadic SCF (TSCF) ─ based on general dyad-triad debates in the supply chain management literature. These later provided the 'main concern' or core category for this study ─ the Dyadic-Triadic distinction. The informants' concern with various forms of SCF (not just reverse factoring), and the evident relevance of banks' perspectives on how SMEs obtained working capital finance, prompted the revision of the initial research question in line with the grounded theory principle that "the emerging analysis helps us develop the dimensions of the research problem" (Urquhart, 2013, p. 79). The emergent research question was thus:

How do SMEs and banks construct their understandings of, and make decisions about, the adoption of supply chain finance (SCF)?

As my methodology was based on grounded theory, an extensive review of the literature was postponed to a later stage, i.e. until after finishing data collection. It had become clear from the SCF literature that starting with no commitment to any theory was justifiable given the clear lack of consensus on relevant theory in the literature ─ 17 theories had been used in 19 relevant journal papers. Therefore, a qualitative, abductive approach drawing on elements of grounded theory methodology (Timmermans and Tavory, 2012; Bryant and Charmaz, 2019; Reichertz, 2019) was adopted to address the emergent research question. Although the focus was on SMEs, it was appropriate to also include banks as the SME participants had highlighted the importance of banking relationships, and the early interviews with banks had provided important insights (as shown in Chapter 5). This adaptation of research design and sampling is consistent with the theoretical sampling concepts of grounded theory. The initial fieldwork was carried out in the UK but, again in line with the theoretical sampling principle of grounded theory, Thai informants were also included in order to examine distributor finance, a specific TSCF (downstream) mechanism which was not offered in the UK during the time of data gathering. This also enabled the investigation of SCF adoption in an emerging country, as suggested by UK informants.

The primary data collection method was unstructured, in-depth interviews based on an interview guide, which was continually refined during data gathering. Data collection and analysis concentrated on how informants understood SCF mechanisms and what underlined their decision to adopt or not adopt SCF, particularly TSCF. The data collection ultimately comprised three phases ─ two in the UK (including a pilot study) and one in Thailand ─ and

yielded a total of 56 informants from 46 organisations, consisting of 29 SME owners-managers from 27 small firms, 22 bank managers from 14 banks and five subject experts. Three academics were also interviewed, but these interviews were only used to provide background for the study, as detailed in Chapter 2, and were not included in the data.

The findings were analysed in relation to transaction cost economics (TCE), for reasons discussed in Chapter 6. Many of the findings could be explained by TCE, but an attempt was made to systematically identify findings that TCE could not explain. These findings beyond a TCE explanation were used to develop a model that provides a framework for better understanding how non-anchor parties (in practice SMEs and banks) understand and make decisions about SCF adoption. Very briefly, the answer to the final research question, embodied in this model, was that 1) non-anchor parties construct their understandings of SCF around a central concern with the entangling of physical and financial supply chains, 2) that they deal with this concern by considering an inter-connected set of major categories comprising risk, relationships, awareness, control and context, 3) and that signalling in particular is a concern of the informants in the possible transition from dyadic to triadic financing schemes.

7.3 Key findings and their significance

The key findings were as follows:

1. The Dyadic-Triadic Distinction emerged from the data as a main concern and the core category. There were five major categories ─ Risk, Relationship, Awareness, Control, and Context – that expressed the way informants dealt with this main concern. These, therefore, indicated the way informants constructed their understandings of SCF, and

made decisions about it, especially decisions about whether or not to participate in TSCF.

2. The entangling of the physical and financial supply chain, which is the identifying characteristic of Triadic SCF, causes problems with existing and potential relationships. This happens with an influential context that is regional (e.g. involving what is allowed by law), industrial (e.g. involving current payment practices), and individual (e.g. an entrepreneur's intuitive need for control).

3. Adopting a TSCF arrangement was not a simple adopt or not-adopt decision but rather a decision to move or not from DSCF to TSCF (and potentially vice versa). In other words, firms do not start with a blank sheet: they start with an existing financing arrangement and existing relationships that they potentially have to change. Making this change involved several concerns that go well beyond the financial cost of different forms of SCF.

4. Some of the issues that concern the actors fall within TCE as a general theoretical basis for explanation, while many go beyond TCE. The findings beyond TCE are primarily concerned with the two main categories of Awareness and Context, and included fear of signalling financial weakness and losing control. Observations in the other three categories ─ Risk, Relationship, and Control – tend to fall within TCE, and included risk of opportunism and levels of uncertainty.

Overall, the thesis of Three is a Crowd states that TSCF is an inherently problematic arrangement for SMEs. Some SMEs might still find a TSCF arrangement beneficial and thus adopt it, but it will raise distinctive concerns about supply chain relationships.

7.4 Contributions to knowledge

This study offers several intended contributions to the study of SCF in the supply chain management literature. The most important of these are perhaps the following:

1. The study makes a central claim that entangling of the physical and financial supply chains, as in Triadic SCF, is the primary issue in SCF from the perspective of SME suppliers and SME distributors. Because of this entangling, TSCF arrangements such as reverse factoring and distributor finance are problematic, and that therefore 'Three is a Crowd'. This is what makes the Dyadic-Triadic Distinction a new and meaningful way of categorising SCF practices, extending the literature beyond categorisations based on the timing and source of finance or collateralisation (e.g. More and Basu (2013); Wuttke et al. (2013b); Templar et al. (2016); Chakuu et al. (2019); Martin and Hofmann (2019)). The proposed DSCF-TSCF categorisation also helps to sharpen our understanding when categorising certain sophisticated SCF mechanisms that have a blend of characteristics (i.e. belonging to a grey area), such as factoring and purchase order finance.

2. The study provides a clear and systematic understanding of the ways in which TCE can and cannot explain the way actors understand SCF and make decisions about it. Prior literature (Wuttke et al. (2013b); Martin and Hofmann (2019)), including the most

recent study by de Goeij et al. (2021), uses TCE, but either picks and chooses other theories to combine with it, or does not look for factors that lie beyond TCE.

3. The study offers important insights into why the literature that is generally favourable to RF, e.g. Wuttke et al. (2013a); Lekkakos and Serrano (2016); de Goeij et al. (2021), usually on technical grounds, does little to explain the reluctance of suppliers to adopt RF (Wuttke et al., 2013a; Wuttke et al., 2019). The most significant of these insights is probably the way in which suppliers have to think about the effect on existing relationships, and the possible signals arising within these relationships, when making a transition to triadic financing.

In addition, there are several other ways in which this work contributes to the literature. First, unlike most of the literature on adoption (e.g., Wuttke et al. (2013b); Martin and Hofmann (2019); though Caniato et al. (2016) is an exception), this study is not confined to one category of financing. Rather, it includes informants' understandings of both pre- and post-shipment SCF arrangements. This is important in understanding their attitudes to moving from one form of SCF to another. Also, dealing with both pre- and post-shipment finance shows that firms needing both of these will face difficulties moving to triadic arrangements because of the possibility of double financing.

Similarly, the study looks at arrangements on both the supply and demand sides of supply chains. It focuses on the perspective of SMEs as either a supplier to or a buyer from anchor firms, while also including insights from banks on both sides. Recent work (e.g. Martin and Hofmann (2019); de Goeij et al. (2021); Kouvelis and Xu (2021)) has started to examine the non-anchor firm's perspective, but the focus is mainly on the supply side, especially reverse

factoring, rather than the demand side. Incorporating both supply- and demand-side financing demonstrates that they have important similarities, when arranged as triadic schemes, that make them problematic. The Dyadic-Triadic Distinction is common to both supply- and demand-side financing, and its significance is only really obvious when looking at both.

Third, this thesis studies the understandings of both adopters and non-adopters of TSCF. Most prior studies focus on the adopters (e.g. Wuttke et al. (2013a); Wuttke et al. (2013b); Caniato et al. (2016); Martin and Hofmann (2019); Wuttke et al. (2019)). Although a very recent paper by de Goeij et al. (2021) does include both adopters and non-adopters, the authors focus on only one TSCF mechanism, reverse factoring. The key point is that non-adopters have often made decisions about TSCF specifically (this was true of some of my UK informants), and only studying adopters might miss some of the important negative factors relevant to firms. Even non-adopters that have not been offered TSCF can tells us what matters to them in their SCF arrangements.

Previous studies discuss the normative and mimetic forces as enablers of TSCF (i.e. reverse factoring) adoption among suppliers (Wuttke et al., 2016; Wuttke et al., 2019). These studies suggest that more suppliers will adopt reverse factoring when they see other suppliers adopting it. However, my study suggests these forces would be weak because of two additional factors. The concern about disclosure of their use of financing, and more importantly the need to maintain relationships both with customers and their own banks, appear to be more imperative than the two institutional pressures (normative and mimetic) to adopt.

Lastly, this study reveals an important role for banks, mostly unrecognised in the literature, as an initiating party, particularly in the early stage of SCF development, as can be seen in

Thailand. This is not simply the matter of who initiates TSCF but rather the consequences of the initiation. When the focal firm initiates a TSCF arrangement and offers it to its suppliers or distributors, banks seem to take an inactive role in the relationship, i.e. not considering SMEs as their customers. On the other hand, when banks take an initiating role, they consider both the anchor firm and SMEs as their customers. This has implications for subsequent relationships and interactions between banks and SMEs. The role of banks as trusted advisors, as mentioned in the interview data, does not apply when banks do not consider SMEs as their customers. Without trusted relationships, SMEs may be sceptical in going through due diligence and performing transactions in TSCF arrangements.

7.5 Practical implications

The results of this study have several implications for practitioners. First, in order to successfully influence SMEs to adopt TSCF, anchor firms need to consider carefully how they approach or promote TSCF to SMEs. This might mean that the anchor firms need to be more open and transparent in discussing payment term extensions or other requirements, such as price reductions, when making the offer. As can be seen from the findings, by offering TSCF in disguise, such as by framing it as an act of benevolence or as part of a 'supplier relations programme', SMEs become sceptical, which results in either an unwillingness to accept or even a decision to reject the offer. Both decisions can eventually have consequences for supply chain relationships, such as loss of business.

Second, the anchor firm needs to be mindful that most SMEs have existing DSCF relationships and the decision to adopt or not adopt the TSCF offer is not straightforward, but rather involves the transition between the two forms of SCF arrangements. This means the managers of the anchor firm that are involved need to take into consideration the cost of financing for SMEs

when determining TSCF prices in order to recruit SMEs to a TSCF programme. In addition, the findings reveal that SMEs need to include the cost of financing in the price of goods; and managers, such as procurement officers, may need to discuss the TSCF offer earlier in the price negotiation. More importantly, earlier discussion of TSCF offers would avoid deceptive signalling and may result in a more successful TSCF programme implementation, i.e. one that achieves the required number of participants.

Third, it is also important that the anchor firm's bank is aware that not only the anchor firm, but also SMEs, are their customers in TSCF relationships. Since the SMEs pay interest when withdrawing money, they are the source of revenue for the banks. Also, the anchor firm's bank needs to consider the TSCF arrangements as an opportunity to overcome information asymmetry between banks and small firms. This opportunity to have visibility of related supply chain transactional data can lead to additional business with SMEs, including cross-selling. Furthermore, banks in general should also be aware that divisionalisation within their own organisations may impede awareness or adoption of TSCF. In particular, operating separate departments for corporate and small business clients can limit the availability of information about such mechanisms.

Fourth, the results show that TSCF arrangements, particularly reverse factoring, appear to be more suitable to SMEs who have certain existing DSCF relationships, such as factoring, rather than others, such as invoice discounting. Anchor firms tend to offer TSCF to the firms that least need it (the ones with cheaper forms of DSCF like invoice discounting) because they tend to be more important as suppliers. The nature of business, including seasonality or sectors, is also an important factor determining the appropriateness of TSCF and managers of the anchor firm need to take this into account when planning to initiate or offer TSCF arrangements.

A further practical implication is that the category structure that came out in the Findings can be used as a systematic way for SMEs to think about different finance options. In other words, when an SME supplier is offered reverse factoring, it can methodically work through the main categories to ask 'what effect would this scheme have on my risk, what effect would it have on my relationships both financial and supply chain, how might it affect the degree of control I experience, do I have sufficient awareness of the scheme and of my potential partners, and is this a suitable context'? The sub-categories provide the next level of detail to help with this procedure. The category structure captures the insights of many informants, and collects them together in an explicit form, so provides a guide for similar firms – especially those that lack specific technical expertise in SCF. Moreover, the analysis of connections between categories provides a prompt to think about how choosing an SCF scheme on one dimension (for example risk) will have consequences for other dimensions (such as relationships).

7.6 Limitations

Limitations are discussed under two main headings: limitations of procedure and limitations of sampling. A detailed description and justification of the methodological choices that were made are given in Chapter 3, but an attempt is made here to deal with their drawbacks. This is followed by suggestions for future studies.

7.6.1 Limitations of procedure

In the initial stages of the work, I considered using a multiple case study approach employing transaction cost economics (TCE) as a theoretical lens. However, as discussed in Chapter 4, given the lack of consensus on theory in the literature, and consequently the need to get into the field early, grounded theory became obvious as the most suitable approach for this study. However, the following limitations are apparent.

One of the key concepts of the grounded theory approach concerns theoretical saturation. Key grounded theorists, e.g. Charmaz (2006), argue that reaching theoretical saturation may not be easy to determine, and is often quite ambiguous. I had reached the point in both the UK and Thailand where additional interviews were not leading to new categories, but I cannot know that further interviews would not have produced new categories. However, the study utilises supporting document analysis to complement interview data and to help ensure that these data move towards being theoretically saturated (the use of documents is recommended as a valid source of data by grounded theorists (Glaser, 1978; Charmaz, 2006)).

Second, there is a point to make about the abductive approach of this study, which led to the identification of the core category that emerged from the data as the Dyadic-Triadic distinction. The work started as an inductive exploratory study where conceptual categories were inductively coded (and so emerged) from the collected data. This was followed by comparing the emergent concepts with knowledge from reading the existing literature on supply chain management, entrepreneurship, and finance (a deductive step because it involved checking whether a specific concept could derive from a theory or proposition in the literature). This is needed to enhance theoretical sensitivity according to Glaser (1978). Nonetheless, this abductive approach is not theory-led, which means a less clear direction of analysis and a less easy comparison with other studies. The recent study by de Goeij et al. (2021) specifically uses TCE as their theory from the start, and the authors utilise only TCE concepts such as bounded rationality and opportunism to code their data. Starting with a 'blank page', i.e. no commitment to any theory, was after much consideration deemed appropriate for this study, but it has made the analysis harder to justify. It is possible that future work may now be in a position to adopt categories suggested by theory, and therefore be less subjective.

Third, the core category and the main categories involved my subjective interpretation and selection, as well as that of the informants. Different researchers conducting interviews with the same informants, or analysing the same data, might come up with different categories. However, all the categories were discussed in detail with an experienced researcher who also read the data and agreed on the categories. With regard to translations of the Thai interviews, I am a Thai, but an experienced English researcher was consulted during the analysis, which helped to gain a good understanding of the cultural and linguistic context. How well a single category structure can really deal with data in multiple languages is open to debate, but being able to speak in both Thai and English helps ensure a reasonable commonality of meaning in concepts like ‘control’ and ‘relationships’.

Fourth, this study employs a qualitative analysis that aims for a more in-depth understanding of SCF adoption from the non-anchor parties’ perspectives, but this limits generalisation. This is in contrast to content analysis, for example, which could be used to quantify the importance of different ideas in the informants’ talk, at the expense of a deep understanding of each informant. Grounded theory aims to produce ‘substantive theory’, which cannot be separated from the specific context of the phenomenon being studied and being “closely linked to the practice domain” (Locke, 2001, p. 35). Many substantive theories can be found in management and organisation studies such as decision-making and leadership (Locke, 2001). But it is important to acknowledge that generalisability may be limited with this analysis.

Fifth, using interviews as a primary source of data means the findings rely a lot on the experience and capability of the interviewer. Informants choose what to say, and it is possible that interviewees will say, or not say, something to avoid giving a bad impression to the interviewer. Interview techniques are discussed in Chapter 4, particularly the importance of

building trust between the interviewer and the informants, given the confidentiality of financial understandings. Another point regarding interviews was the change to in-depth, unstructured interviews. This study started with semi-structured interviews following an interview guide, but later moved to unstructured interviewing, letting the informants talk and allowing for the development of emerging insights, such as the importance of banking relationships. With both methods of interviewing, there are still opportunities for informants to be selective about what they reveal, and not always give an accurate account.

7.6.2 Limitations of sampling

With regard to sampling, the following limitations are apparent.

The study started with convenience sampling followed by theoretical sampling. Although this is in line with a grounded theory approach, as discussed in Chapter 4, it means that sampling was not statistical, and findings cannot be generalised on the basis of statistical arguments. Rather, the aim of this study was to provide in-depth explanations.

While other studies have investigated SCF practices in various regions of the world, mainly European countries and China, in this study all informants were either in the UK or Thailand. Theoretical sampling guided the inclusion of Thai informants after the initial focus on UK informants. Therefore, this study does not allow for the generalisation of findings to be applied to other regions of the world. But it does specifically incorporate the role of context, so tries to avoid unreasonable claims of generality to all regions.

The main informants were members of SMEs and banks, while subject experts and supporting documents were used for triangulation. Focal firms (referred to less ambiguously as 'anchor

firms' from chapter 5 onwards) were excluded by intention. This is in contrast to many studies where the focus is on the focal firms. Some studies also include other SCF actors, in addition to focal firms, such as suppliers and banks, and often researchers get access to these via the focal firms. My intention was to avoid the problem of being led by focal firms and introducing bias if they were responsible for selecting the SME suppliers or distributors for interview. However, it is acknowledged that the focal firms' perspectives are not represented here. Similarly, the study concentrated on banks as finance providers, ignoring non-bank institutions such as specialised factors and LSPs providing SCF. Their perspectives might add important insights, as indicated in some of the literature (e.g. Chakuu et al., 2020).

Finally, uneven sampling occurred due to the main source of data in the UK being SMEs and banks, whereas banks were the main source of data in Thailand, owing to the early stage of SCF development in this country. This difference in the maturity of SCF in these two settings thus led to different degrees of representation of different actors in the two regions. This also meant that a comparative analysis was not possible, because of the very different stages of SCF development ─ rather mature in the UK, but at a very early stage in Thailand. Nonetheless, the regional difference helped to reveal the importance of context, particularly the 'Legality' and 'Culture' sub-categories. In addition, a number of useful insights were gained from examining variants of SCF available in Thailand that are seemingly ignored in the SCF literature but clearly discussed in key practitioner literature, i.e. the 'Standard Definitions for Techniques of Supply Chain Finance' published by the Global SCF Forum (2016). This again helps provide a more comprehensive picture of SCF adoption.

7.7 Suggestions for future research

The previous discussion of limitations has suggested several opportunities for future research. Such investigations are identified as follows.

There is an opportunity to carry out a study involving a wider range of SCF actors, including anchor firms. Other actors that might be useful to include are technology platform providers, non-banking institutions, and FinTech companies who increasingly play a significant role in TSCF relationships. However, as argued earlier, it is important to avoid the issue of getting access to non-anchor firms via their anchor firm as this could lead to bias.

A further confirmatory study to test theory emerging from the study, as recommended in grounded theory (Glaser and Strauss, 1967), could be carried out. This would involve more systematic sampling, and testing specific hypotheses derived from my substantive theory — for example that relationships are the most important factor in decisions to adopt supply chain finance schemes with greater degrees of entangling. This might include collecting data using surveys, possibly with SMEs, to cover reasonably large numbers. Alternatively, further qualitative work might use different methods, such as focus groups, to encourage and provoke informants to reveal more about the subject matter. Concerns about signalling in SCF relationships look worthwhile as a topic for such a method as they concern largely unwritten meanings.

It might be particularly useful to focus on governments and the public sector. This could focus on programmes like the UK's SCF Scheme of 2012, which is still in place. It would be informative to know how well it has worked, who has used it, and why. This would also be interesting in Thailand, particularly because SCF is at an earlier stage of development. This

might provide an opportunity for a comparative study and lead to policy implications, such as how much public sector support, promotion and regulation matter to potential participants in more complex SCF schemes.

Investigation into the abuse of TSCF in cases like Carillion and Greensill, is needed. This would necessarily be a qualitative study, or a mixed method study, to obtain sufficient depth. It also might be revealing to know how the abuse of SCF is affecting the operation of supply chains more generally, for example whether it is undermining trust in relationships with firms offering facilities like reverse factoring to their suppliers.

From the findings, signalling problems appear to be another interesting perspective for studying SCF. Future research might look at how signals intentionally and unintentionally sent by SCF actors affect the understandings of, and the adoption decision of, SCF, and how signals may be interpreted differently by the receivers from the intention of the senders. This should probably be a qualitative study employing signalling theory as a theoretical lens based on in-depth interviews, because my findings suggest it is likely to involve quite subtle interpretations of what SCF decisions really say about the decision maker’s motives and positions.

Finally, this study has provided an insight into the uniqueness of practices such as retentions and the complexity of invoicing in the construction industry, which led to banks seemingly being very cautious in providing DSCF but happy to provide TSCF. A future study that focuses on the construction industry would provide a deeper understanding of how SCF can work in different sectors, particularly in this unique industry that first highlighted the plight of SCF misuse.

7.8 Conclusion

This chapter concludes this study by 1) explaining how the research questions both initial and emergent were addressed; 2) summarising key findings and their significance; 3) presenting contributions to knowledge and their practical implications; and 4) discussing limitations of the study and suggesting future work. Although there are some clear limitations, the central insight that the main concern in supply chain finance is the entangling of supply chain and financial relationships has both theoretical and practical significance. It suggests that theories of supply chain finance need to deal with the complexity of organisational relationships as a principal construct, both how it is explained and how it explains decision making. And it suggests that the practice of supply chain finance should pay attention to the consequences it has for these relationships, what signals it sends, and how it changes the control that participants experience.

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Appendices

Appendix A: Formulae for calculating DSO, DIH and DPO

Below are formulae for calculating DSO, DIH and DPO (Richards and Laughlin, 1980):

Receivable Days (Days Sales Outstanding: DSO)

How long it takes for a firm, on average, to get paid

$$\text{DSO} = \frac{\text{Accounts Receivable}}{\text{Net Sales}} \times 365$$

Inventory Days (Days Inventory Held: DIH)

How long it takes, on average, for inventory to move through a firm's production stages and be sold

$$\text{DIH} = \frac{\text{Inventory}}{\text{Cost of Goods Sold}} \times 365$$

Payable Days (Days Payables Outstanding: DPO)

How long it takes for a firm, on average, to pay its suppliers

$$\text{DPO} = \frac{\text{Accounts Payable}}{\text{Cost of Goods Sold}} \times 365$$

Appendix B: Interview questions

I. Questions for SME suppliers

1. Identity and general information

- What is your organisation's main area of activity?
- Can you describe and map your supply chain, including your supply base?
- Who do you normally provide services or deliver your products to?
- Can you describe your different relationships with your customers?

2. Payment term, late payment and payment extension

- What are your payment terms?
- Have you been paid late by your customers?
- Have you been asked to extend payment terms by your customers?
- How did you deal with the problems of late payment or payment extension?
- How did you cover the gap between paying your suppliers and being paid by your customers?

3. Financing options

- What sources of short-term finance have you used?
- What are the reasons or circumstances for using these finance options?
- Have you used factoring? If yes, what are the reasons or circumstances for using it?
- What are your most used/favourite finance options? why?

4. Supply chain finance (SCF): awareness/knowledge/involvement

- Are you aware of SCF as a new source of short-term finance?
- Have you been offered SCF by your buyers, financial institutions, or SCF platform providers?
- Have you been recently considered adopting SCF programme? If yes, what made you interested in adopting SCF?
- What will be the main internal and external challenges to face when implementing SCF programme?
- What are the main opportunities of SCF according to you?
- In your view, what does SCF lack today to be widely implemented?
- What would be your recommendations for having a successful SCF programme?

II. Questions for financial institutions or SCF platform providers

1. Identity and general Information

- What is your organisation's main area of activity?
- Who do you normally provide service or offer your products to?
- Can you describe your different relationships with your customers?

2. Supply chain finance (SCF): awareness/knowledge/involvement

- Are you aware of SCF as a new source of short-term finance?
- Have you offered SCF to your customers?
- What will be the main internal and external challenges to face for the companies implementing SCF programme?

- What are the main opportunities of SCF according to you?
- In your view, what does SCF lack today to be widely implemented?
- What would be your recommendations for having a successful SCF programme?

III. Questions for SCF experts only

1. Identity and general Information

- What is your organisation's main area of activity?
- Who do you normally provide service or offer your products to?
- Can you describe your different relationships with your customers?

2. Supply chain finance (SCF): awareness/knowledge/involvement

- Can you describe your involvement of SCF?
- What made you interested in SCF?
- What will be the main internal and external challenges to face for the companies implementing a SCF programme?
- What are the main opportunities of SCF according to you?
- In your view, what does SCF lack today to be widely implemented?
- What would be your recommendations for having a successful SCF programme

Appendix C: Potential for descriptive quantitative analysis

In principle it is possible to analyse the data quantitatively, classified under each main category, to show the distribution over the various interview sources (banks and firms). This may suggest systematic differences between types of informant (SMEs and banks, for instance), and between regions (UK and Thailand). However, this analysis has not been carried out for two main reasons:

1. The sampling was not a systematic, or robust statistical sample, whether stratified or not. It was a convenience sample, in the sense that access had to be gained where possible, given the difficulties of interviewing people about potentially commercially sensitive opinions. Following the principles of Grounded Theory, it was also a purposive and theoretical sample, where the theory was emerging with the data, and not prior to it. This means that quantitative results cannot be generalised to any meaningful population. In contrast, qualitative insights, which describe in rich detail, can be given general significance on the basis of their content – for example whether they refer to local conditions or not.

2. The data collection did not involve repeating an exact standardised process. As described earlier, the interviewing was carried out to a general agenda, but the questioning followed interesting lines of investigation as they developed during each interview. And the agenda was modified over the course of the fieldwork. This means

that the probability an informant would say something that would be coded under a particular category was not constant.

Table C-1 to Table C-6 indicate what kind of outcome a descriptive, quantitative analysis would produce for just one sub-category. The tables simply show which sources provided one or more fragments of interview or documentary data for each sub-category. It was my judgment that for the reasons just given this is not very informative and potentially misleading. For the purposes of this thesis, it was much more important to know how ‘risk appetite’, for example, was involved in the way the informants thought about supply chain finance, and in particular how it contributed to the way they dealt with the dyadic-triadic distinction, than it was to count how many seemed to refer to risk appetite. A quantitative analysis could be very informative, but it would have to be carried out on the basis of a different research design altogether.

Table C-1 UK firm

Category	**Sub-category**	**ES 1**	**ES 2**	**ES 3**	**ES 4**	**ES 5**	**ES 6**	**ES 7**	**ES 8**	**ES 9**	**ES 10**	**ES 11**	**ES 12**	**ES 13**	**ES 14**	**ES 15**	**ES 16**	**ES 17**	**ES 18**	**ES 19**	**Total (Out of 19)**
Risk	Risk Appetite	√			√									√	√	√			√	√	7
	…																				

Table C-2 UK bank

Category	**Sub-category**	**EB 1**	**EB 2**	**EB 3**	**EB 4**	**EB 5**	**Total (Out of 5)**
Risk	Risk Appetite	√	√	√	√	√	5
	…						

Table C-3 Thai firm

Category	Sub-category	TS 1	TS 2	TS 3	TS 4	TS 5	TS 6	TS 7	TS 8	Total (Out of 8)
Risk	Risk Appetite	√	√	√	√	√	√	√	-	7
	…									

Table C-4 Thai bank

Category	Sub-category	TB 1	TB 2	TB 3	TB 4	TB 5	TB 6	TB 7	TB 8	TB 9	Total (Out of 9)
Risk	Risk Appetite	-	√	-	-	-	√	-	-	-	2
	…										

Table C-5 Expert

Category	Sub-category	EE 1	EE 2	EE 3	EE 4	EE 5	Total (Out of 5)
Risk	Risk Appetite	-	-	-	-	-	0
	…						

Table C-6 Supporting document

Category	Sub-category	DEB 1	DEB 2	DEB 3	DTB 3	DES 3	DES 5-1	DES 5-2	DES 5-3	DES 7	DES 9	DTB 6-1	DTB 6-2	DEE 5	Total (Out of 13)
Risk	Risk Appetite	√	√	-	-	-	-	-	-	√	-	-	-	-	3
	…														