



THE TREND OF LATEST RESEARCHES IN SUPPLY CHAIN FINANCE AND EMERGING PROBLEMS

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CONTENTS

1. Introduction
2. Definition and current literature of Supply Chain Finance
3. The trend of Supply Chain Finance Literature
4. Emerging problem in Supply Chain Finance researches
5. Implications



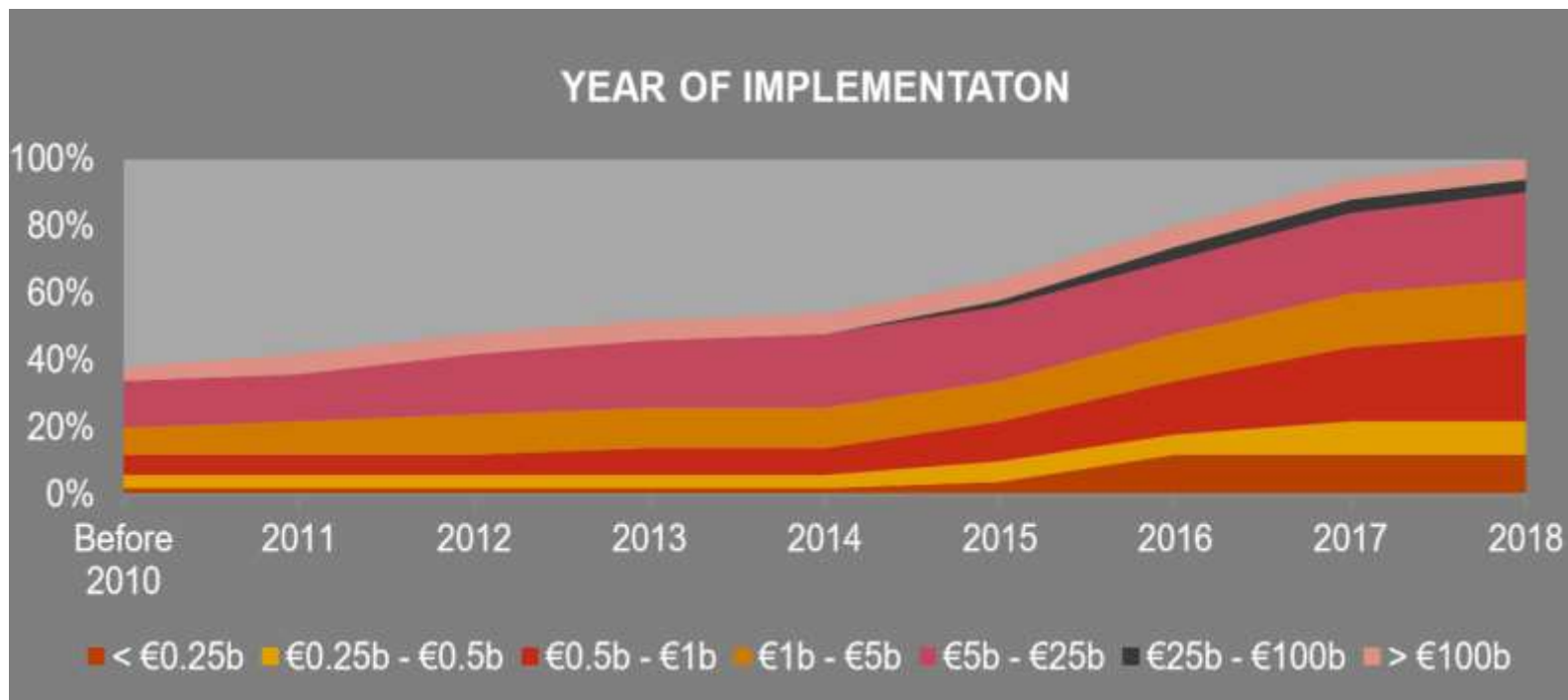


INTRODUCTION

1. The importance of Supply Chain Finance
2. The essential of review Supply Chain Finance Literatures

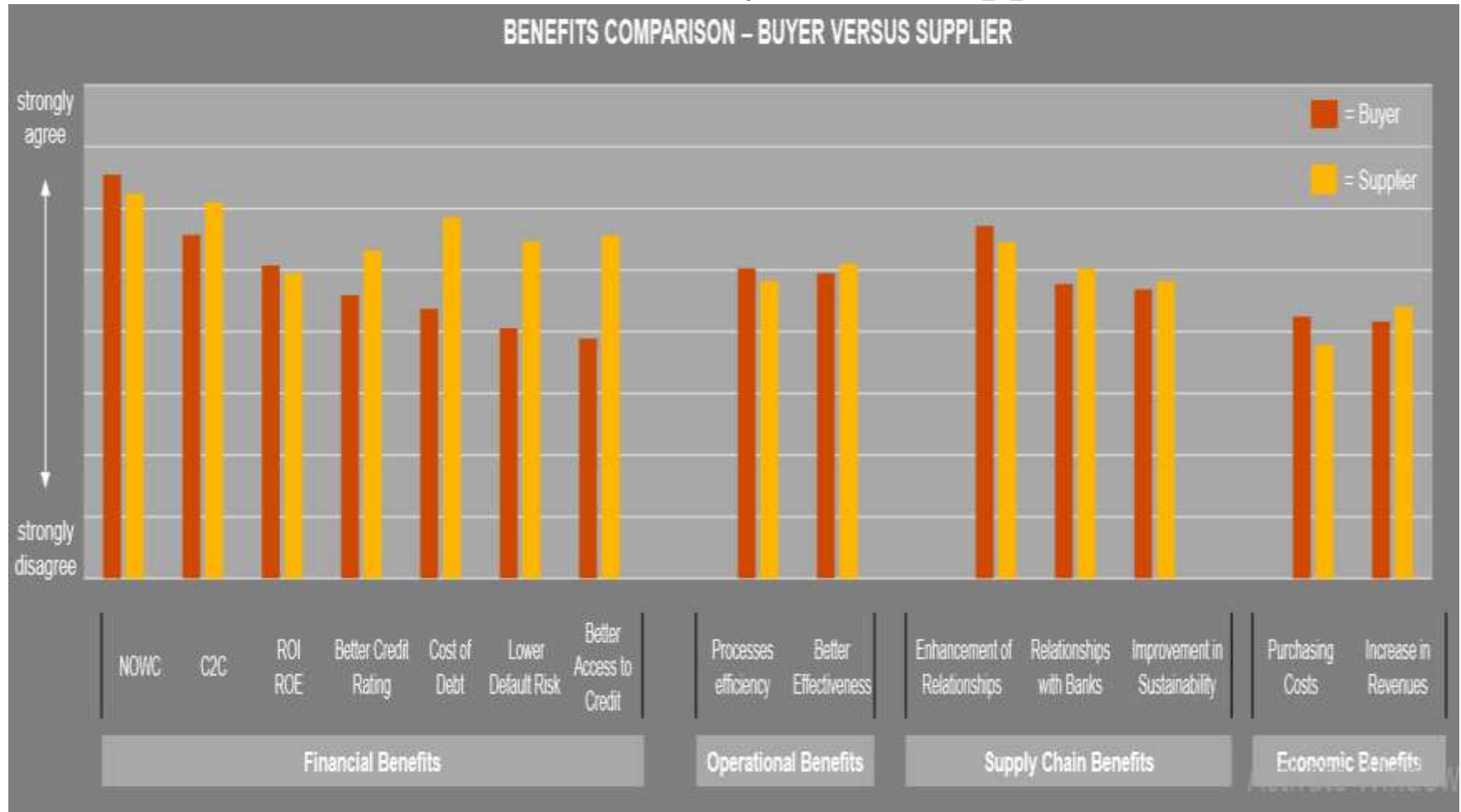
THE IMPORTANCE OF SUPPLY CHAIN FINANCE

- There is an increasing trend for implementing supply chain finance in operation varied from small-sized to big-sized firms



PwC (2019). Supply Chain Finance Barometer- Entering a new era of maturity and solution.

- Supply chain finance brings benefit on financial benefits, operational benefits, supply chain benefits, and economic benefits for both buyer and supplier



PwC (2019). Supply Chain Finance Barometer- Entering a new era of maturity and solution.

THE ESSENTIAL OF REVIEW SUPPLY CHAIN FINANCE LITERATURES

- Integrated supply chain management: **the coordination of relevant flows** for the improvement of the total efficiency and profitability of the supply chain.
- The previous literature emphasis on integrating **physical and information flows**.
- What operational literature has not considered fully, at least not until recently, is the **integration of physical, financial, and information flows**, along the supply chain and between firms in a supply chain and investors





DEFINITION AND CURRENT LITERATURE OF SUPPLY CHAIN FINANCE

DEFINITION

- *“Supply Chain Finance is defined as the use of financing and risk mitigation practices and techniques to optimize the management of the working capital and liquidity invested in supply chain processes and transactions”*
- Global Supply Chain Forum, International Chamber of Commerce



CURRENT LITERATURES OF SUPPLY CHAIN FINANCE

There are 4 main themes

1. Working Capital Management
2. Risk Analysis
3. Supply chain finance collaborative mechanism
4. Supply chain finance adoptions



THEME 1: WORKING CAPITAL MANAGEMENT

- One of the first topics related to supply chain finance
- Early studies on working capital management focus on corporate finance rather than supply chain management
- Most of researches conducted a regression model to examine a number of hypotheses, yet were unable to reach a universal conclusion
- The conclusions were derived by different industries and different type of goods



THEME 2: RISK ANALYSIS

- Those researches under this area focused on analyzing several risks when adopting Supply Chain Finance
- Common risks identified by previous studies were investment risk, cost of capital, credit risk, risks generate from market failure, market risk, information asymmetry, demand risks.
- Most of the researches conducted conceptual framework, mathematical model to mitigate those risks in different situations and recommended for the optimal solution for firms when adopting Supply Chain Finance



THEME 3:

SUPPLY CHAIN FINANCE COLLABORATIVE MECHANISM

- Researches focused on exploring the role of Supply Chain Finance participations (banks or non-bank financial service providers)
- The research category in this area is mainly case study
- Scholars applied primary data from survey or in-depth interview in most of the cases



THEME 4: SUPPLY CHAIN FINANCE ADOPTION

- This area was diversified
 - Motivations, and impediments of Supply Chain Finance adoption;
 - Outcomes of SCF adoptions;
 - Types of adoptions; and
 - Process of adoptions
- Case study was the main approach.





THE TREND OF SUPPLY CHAIN FINANCE LITERATURE

EXPECTATIONS FOR THE SUPPLY CHAIN FINANCE RESEARCH

- Having audience in both Operation Management and Finance communities
- Presenting meaningful interactions between Operation Management and Finance considerations
- Contributing to the disclosure in all discipline and providing rigorous foundations for future research and applications
- Successfully blend methodologies and ideas from multiple discipline

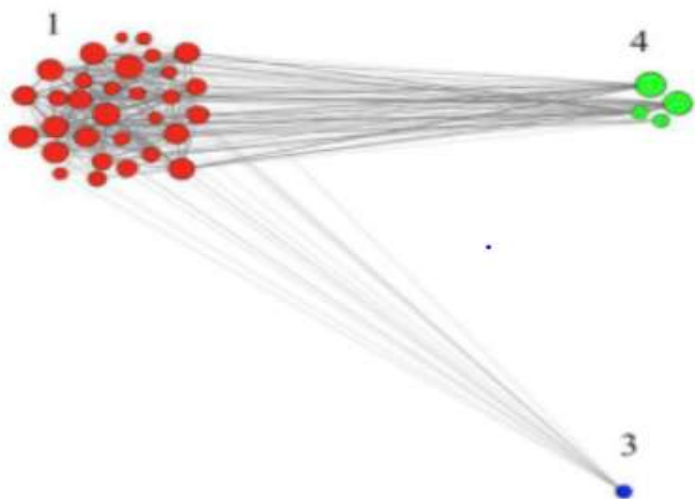


THE EVOLUTION AND TREND OF SUPPLY CHAIN FINANCE RESEARCHES

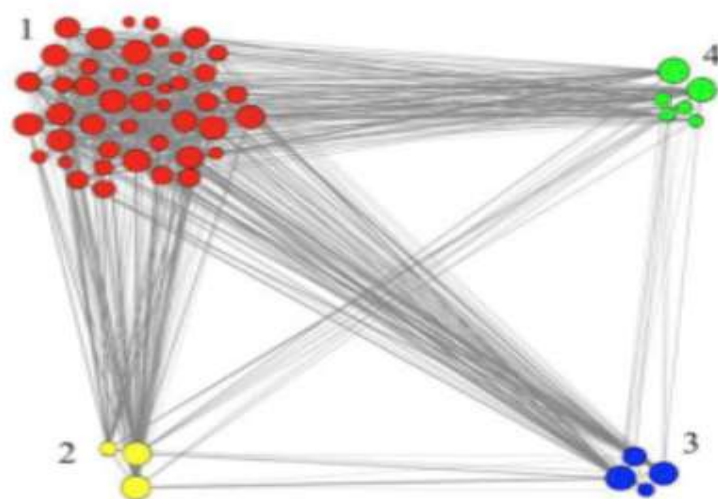
There are 4 main clusters of researches

1. Deteriorating inventory model under trade credit policy based on EOQ/EPQ model
2. Inventory decision with trade credit policy under more complex situation
3. Interaction between replenishment decisions and delay payment strategies in supply chain
4. Roles of financing service in supply chains

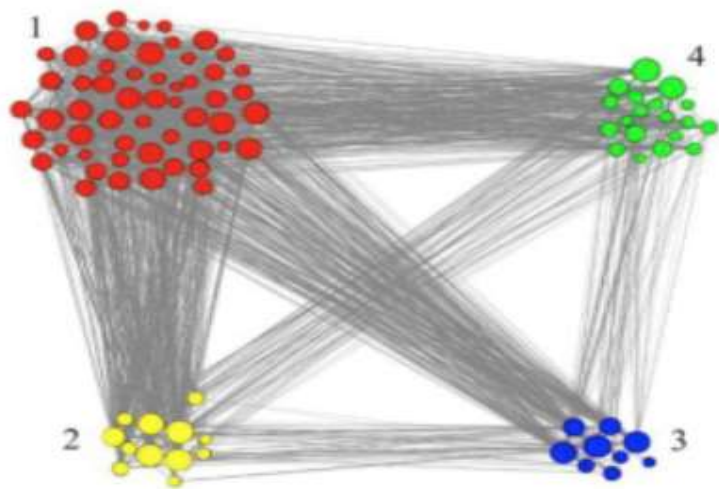




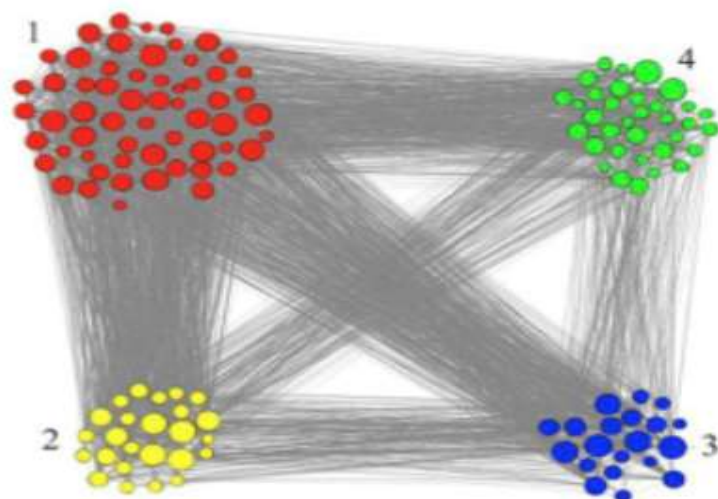
(i) 1973–2006



(ii) 1973–2008

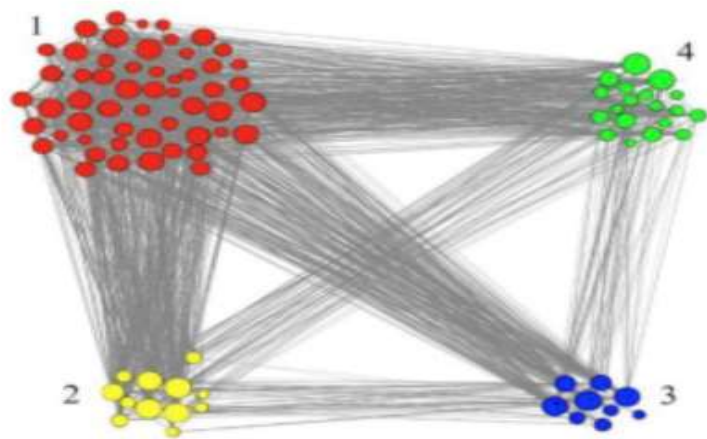


(iii) 1973–2010

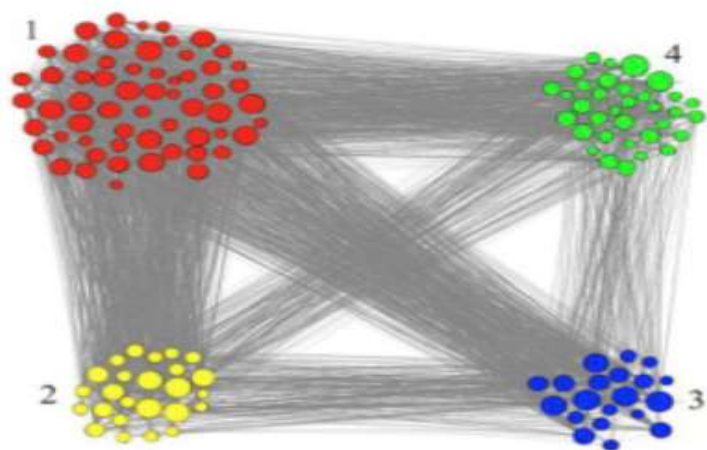


(iv) 1973–2012

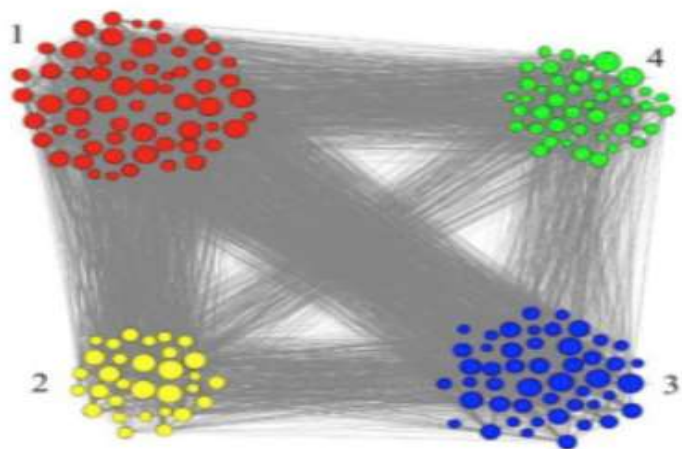




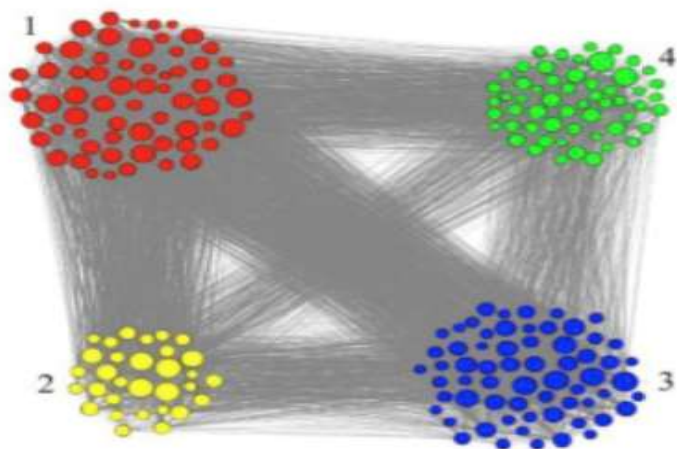
(iii)1973–2010



(iv)1973–2012



(v)1973–2014



(vi)1973–2016



GOING BEYOND ONE-LEVEL OR TWO LEVEL TRADE CREDIT

- Cluster one focuses on the one-level trade credit
- Cluster two develops the model based on Cluster one and considers the two-level trade credit
- There is a need to go beyond one or two levels and to look into the supply chain finance of multi-tier of supply chain
- Whether the conclusions in the one- or two-level SCF will stand in the multi-level situation or how the conclusions will change from the original forms of trade credit to more complex forms



RELAXING AND INVESTIGATING NEW ASSUMPTION

- Existing SCF research papers across Clusters one to three have the assumption of symmetric information
- In reality, however, this may not be the case, e.g., more powerful firms in the supply chain tend to have more financial information than others
- In Cluster four, more papers consider the asymmetric information assumption examine three information scenarios



MULTIPLE DISCIPLINARY CONSIDERATION

- In the previous cluster, they assume that financial market are risk neutral
- In reality, however, different firm has different attitudes towards risk
- Cluster 4 begin to build risk models
- Papers in Cluster four have examined complicated situations
 - considering budget-constrained conditions,
 - assuming that the retailer may have bankruptcy risk.
 - more forms of financing mechanisms such as taxes should be introduced to SCF research





EMERGING PROBLEMS IN SUPPLY CHAIN FINANCE RESEARCHES

Problems are analyzed according to each trend

PROBLEMS WHEN GOING BEYOND ONE-LEVEL OR TWO LEVEL TRADE CREDIT

- Uncovering new perspectives on motives and extent of use of trade credits needs to look at more complex than bilateral monopoly supply chains.
- Competition among pool of suppliers
- Multiple-product settings that suppliers are serving to retailers, how it affecting the trade credit terms
- Supplier-led financing has received a great deal of attention in literature, the buyer-led practices have been thinly investigated



PROBLEMS WHEN RELAXING AND INVESTIGATING NEW ASSUMPTION

- The cases in which supplier and retailer have different risks, different credit ratings, different financing cost, and market power.
- The retailers have pricing control of their end markets or ability to influence the demand
- Firm's capital structure and the associated agency problems add new layers of complexity on the trade credit terms question



PROBLEMS WHEN HAVING MULTIPLE DISCIPLINARY CONSIDERATION

- Lacking of comprehensive risk management concepts and tools
- Financial hedging of demand, currency, commodity, and other supply chain risks has been understudies
- The fundamental question if financial hedging should be used for managing operational risks was left aside.



IMPLICATIONS

- The assumption of multiple suppliers, multiple retailers, multiple product portfolio is challenging but should be considered
- Because of multiple disciplines of Supply chain Finance, different financial frictions (credit rating, market power, financing costs) should be included for different players.
- Financial derivatives are recognized as the integrated risk management in corporate finance. Its application for supply chain management is essential to investigate





THANK YOU!