



4th International Conference of Business and Management in Emerging Markets

Supply Chain Management implementations in Italian SMEs.

A proposed taxonomy

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- 1999: Degree in Management Information System at University of Padua
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- 2004: Post Doc. in Business Management at University of Padua
- 2004-2011: Visiting Professor at University of Padua
- Today:
 - Consultant certified by European Logistics Association
 - CEO of P&P Consulting & Services
 - Vice President of SCM Academy (Supply Chain Management Academy), Italian association of logistics and supply chain management
 - Lecturer at Transilvania University – Brasov ROMANIA
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 - Marketing Researcher at "Largo Consumo", Italian magazine of marketing and economics and "Il Giornale della Logistica", Italia magazine of Logistics and Supply Chain Management
 - Author of 10 papers in International Scientific Reviews and more than 100 articles in Italian reviews.

Agenda

- Supply chain management
- SMEs
- SCM practices
- The research
- Conclusions



Supply chain management

- A supply chain consists of all stages involved, either directly or indirectly, in fulfilling a customer request. A supply chain includes manufacturer, supplier, transporters, warehouses, retailer, third-party logistic provider, and customer. The objective of supply chain management is to maximize the overall value generated rather than profit generated in a particular supply chain. (Chopra & Meindl, 2001)
- Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers (CSCMP, 2004).



Supply chain management

- The main drivers of integration are listed by Handfield and Nichols (1999) as:
 - the information revolution;
 - increased levels of global competition creating a more demanding customer and demand driven markets; and
 - the emergence of new types of inter-organizational relationships.
- Integration means sustainability, because companies reduce wastes and energy through a better inter-organizational approach (Kumar & Rahman, 2015)
- Integration is based on different levels of interaction amongst the involved firms ranging from harmonizing or synchronizing activities (=coordination) to working together as equal partners (=cooperation) and even acting as one single entity (=collaboration).
- The constructs of 'coordination', 'cooperation' and 'collaboration' (CCC) seem to be important ingredients or drivers for supply chain management (SCM) as Frankel et al. (2008) or Mentzer et al.(2008) argue for.



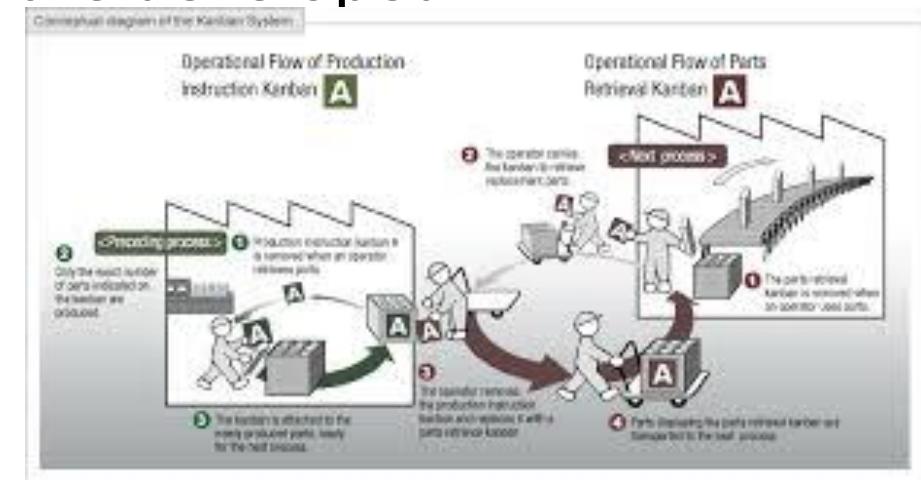
SMEs

- Small and medium-sized enterprises (SMEs) represent 99% of all businesses in the EU. Staff headcount more than 50 and less than 250 employees, turnover between 10 and 50 m€ (EU Commission, 2003)
- Small and medium-sized firms contribute strongly to the development of new ideas and technologies which drive the growth of new industries (Perks & Bouncken, 2004).
- Lack of strategic alignment of information technology; lack of awareness of potential benefits of supply chain technology and the lack of motivation are the main barriers to supply chain information integration among SMEs (Harland et al., 2007)
- The use of information technology has been found to improve business competitiveness, with the internet providing the opportunity for SMEs to compete on equal terms with Les.



SCM practices

- Many Supply Chain Management practices are developed in companies.
- Main practices are:
 - Kanban
 - Just In Time
 - Milk Run
 - Vendor Managed Inventory
 - Consignment Stock
 - Centralized Purchasing
 - Co-opetition
 - Blockchain



Goals

- This paper aims to evaluate the supply chain integration in Italian SMEs with regards to the following research questions:
 - Are SMEs aware on the benefits by integration with suppliers and/or customers?
 - Which practices are implemented when integrating with external actors?
 - Is integration mainly vertical or horizontal?
 - Which are main problems to integration?

Class size	Number of enterprises			Number of persons employed		
	Italy		EU-28	Italy		EU-28
	Number	Share	Share	Number	Share	Share
Micro	3 565 046	95.1 %	93.1 %	6 661 193	45.9 %	29.4 %
Small	162 598	4.3 %	5.8 %	2 921 184	20.1 %	20.0 %
Medium-sized	18 465	0.5 %	0.9 %	1 808 802	12.5 %	17.0 %
SMEs	3 746 109	99.9 %	99.8 %	11 391 179	78.5 %	66.4 %
Large	3 221	0.1 %	0.2 %	3 125 454	21.5 %	33.6 %
Total	3 749 330	100.0 %	100.0 %	14 516 633	100.0 %	100.0 %

Source: European Commission, 2019

Sample

- The sample is composed on 24 manufacturing companies with more than 50 employees to 250.
- Companies came from different industries, such as food supplements, furniture, air conditioning, maritime furniture, electronic components, and fashion.
- In this paper a qualitative method, based on inductive multi-case research (Miles and Huberman, 1994), has been adopted to understand which integration models SMEs adopt with their suppliers or customers

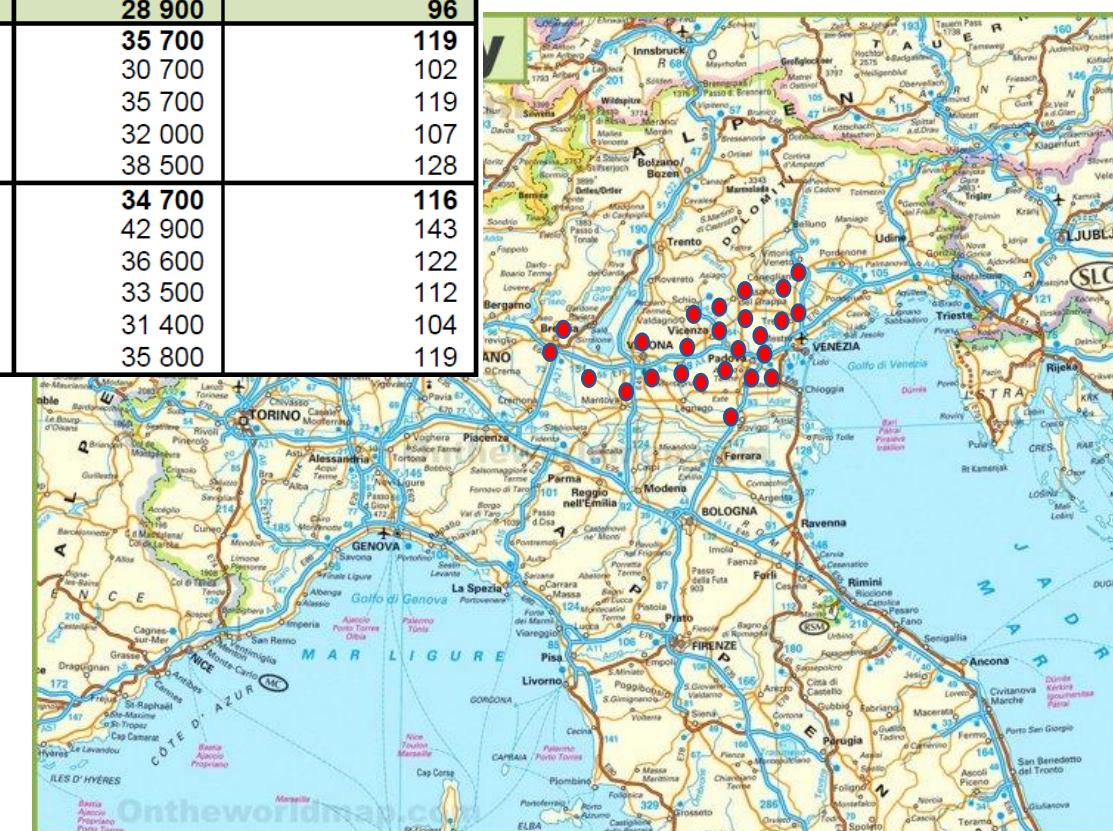
INDUSTRY	NUMBER OF SMES
MECHANICAL	4
FURNITURE	3
FOOD SUPPLEMENTS	3
ELECTRONIC DEVICES	2
AIR CONDITIONING	2
PLASTICS PACKAGING	1
CLEANING MACHINES	1
MARBLE	1
FASTENER SISTEM	1
MEDICAL DEVICES	1
SEATING SYSTEMS	1
FASHION - APPAREL	1
MARITIME FURNITURE	1
ELECTRICAL COMPONENTS	1
CHEMICAL DETERGENTS	1
TOTAL	24

EMPLOYEES RANGE	NUMBER OF SMES
50-100	11
100-150	7
200-250	3
150-200	3

North East Area

Regional GDP in the European Union, 2017

Region (NUTS 2016)	GDP € million	Share in national GDP %	GDP per capita €	GDP per capita PPS	GDP per capita PPS, EU28=100
ITALY	1 724 955	11.2	28 500	28 900	96
Nord Ovest	567 394	32.9	35 200	35 700	119
Piemonte	132 671	7.7	30 300	30 700	102
Valle d'Aosta / Vallée d'Aoste	4 453	0.3	35 200	35 700	119
Liguria	49 315	2.9	31 600	32 000	107
Lombardia	380 955	22.1	38 000	38 500	128
Nord Est	398 789	23.1	34 300	34 700	116
Provincia Autonoma di Bolzano / Bozen	22 273	1.3	42 300	42 900	143
Provincia Autonoma di Trento	19 473	1.1	36 100	36 600	122
Veneto	162 224	9.4	33 100	33 500	112
Friuli-Venezia Giulia	37 642	2.2	30 900	31 400	104
Emilia-Romagna	157 177	9.1	35 300	35 800	119



Main Results

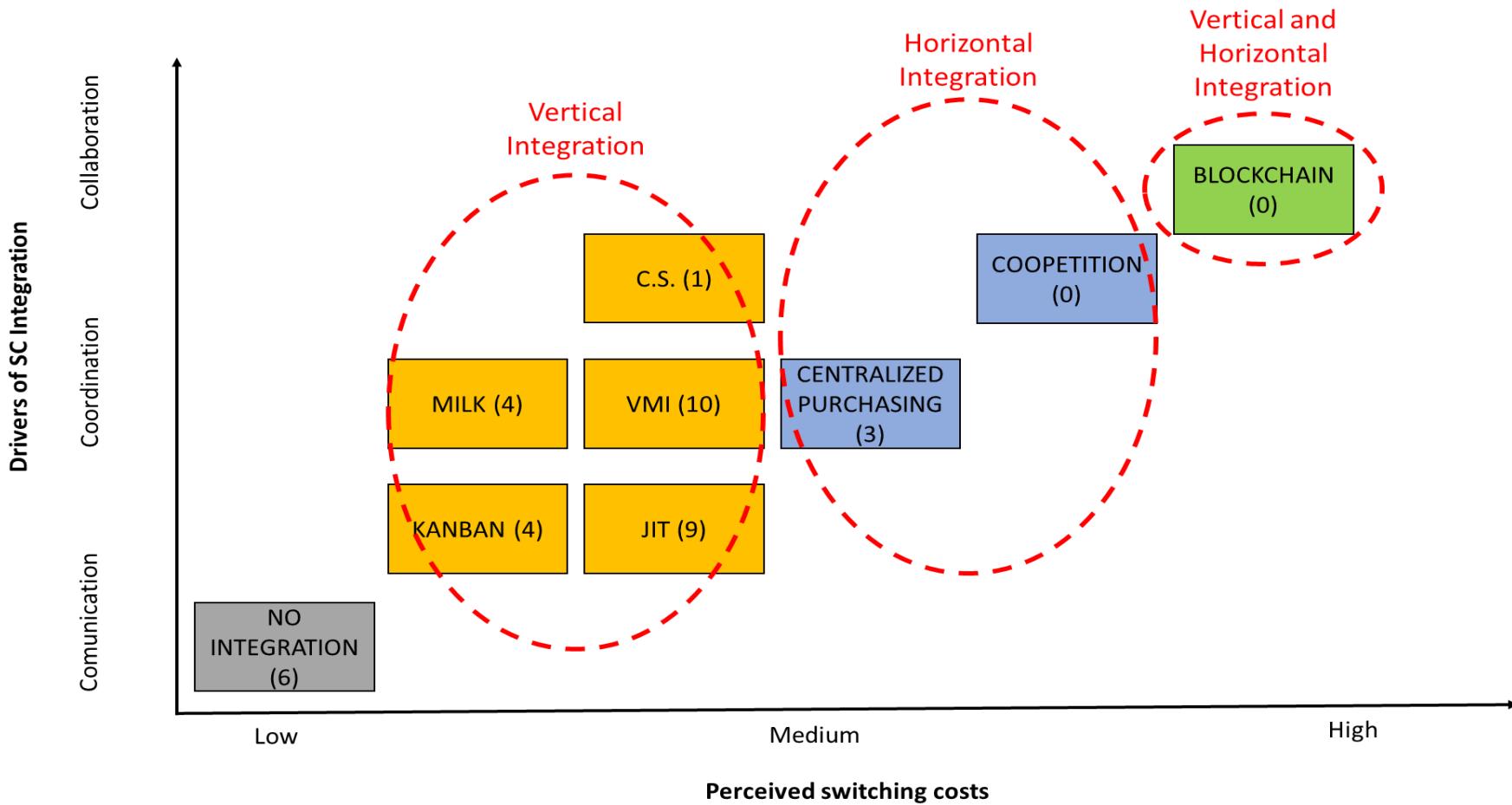
- SMEs develop prevalently VMI initiatives and JIT, because they don't require investments and are easy to implement
- Organizational and technological changes and trust are the main factors blocked SCM implementation
- SMEs perceive high switching cost in front of initiatives on centralized purchasing or blockchain.

High switching cost means the perception to change requires not only investments, but more competences, more resources, new technological implementation, and costs to adapt the current ERP to new software and hardware.

Main Results

- Companies belong to grocery industry sell product to large enterprises and they contract prices and quantity with **centralized purchasing** departments. All SMEs don't know the meaning of "coopetition", while they are aware on blockchain, but they don't know how it works.
- Companies without integration are aware SCM can help them to improve forecasts and hence purchasing schedules by streamlining inter and intra organizational activities, but they declare it is very difficult to implement, probably there is not enough trust with potential partners.
- SMEs with more than 100 employees are evaluating to integrate their suppliers or customers, but the integration is only a project to implement in the next years. On the contrary, companies with less than 100 employees implement **Kanban** or **JIT** initiatives only when customers (usually large companies and supply chain leader) require their adoption.

The proposed taxonomy



Conclusions

- Are SMEs aware on the benefits by integration with suppliers and/or customers?
 - Yes, they are.
- Which practices are implemented when integrating with external actors?
 - SMEs mainly integrate horizontally and adopt VMI and JIT practice. 6 cases are not integrating with customers or suppliers.
- Which are main problems to integration?
 - This paper confirms the findings of literature about barriers on supply chain (Sammuel and Kashif, 2013):
 - Lack of information Technology
 - Lack of information sharing
 - Lack of trust
 - Lack of knowledge
 - Perceived costs of integration

Further researches

- The paper considers only a limited number of SMEs concentrated in a narrow area of Italy. Information gathered haven't statistical value.
- Our final thoughts on future work are that outlined propositions and theoretical constructs can be made more precise and focused from continued and cross-sectoral studies. These will help to ensure that the generalizations made are robust enough for industry-wide application.
- To this end, we will now go ahead with the case study developments for the more detailed analysis of propositions and subsequently, will refine and update our understanding.

Thanks for Your Attention

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