

# **Twenty years of IMP Conference: a lexicometric approach**

## **Work-in-progress**

### **Abstract**

Industrial marketing is a major aspect of daily business management, but it is not the major concern of marketing research. Since 1984, the IMP Group has annually served as a forum for scholars in business to business around the issues of industrial business and marketing. This Annual IMP conference has had a major influence on research in industrial business, business to business marketing and purchasing, with publications in some of the best recognized academic journals in the field as well as in IMP Journal, the community academic journal.

Few bibliometric studies have been released in the field (Wuehrer & Smejkal, 2013) as well as some analyses of the network of scholars IMP constitutes (Morlacchi et al., 2005; Henneberg et al., 2009). This project however has two different goals : first of all, to analyze the structure of IMP research in terms of content. This means understanding the driving forces leading IMP thought. Second of all, in a longitudinal approach, identify past, present and future tendencies of research in IMP Group.

In order to do so, manuscripts from most conferences have been gathered and coded in order to proceed to a Lexicometric analysis. The goal of such linguistic approach is to find among this large amount of data the emerging conceptual fields. Such conceptual fields constitute the pattern of IMP Group research.

Findings show there are some major tendencies in the IMP Group Research and these tendencies live all along conferences. In the meantime, there are some tendencies that are of a shorter term; some are disappearing while some are emerging and may represent the future of IMP Group.

**Key Words:** IMP, Literature Review, Longitudinal, Lexicometric, Industrial Marketing

## Literature Review

Industrial marketing is a major aspect of daily business management, but it is not the major concern of marketing research (Peters et al. 2013). The field of business-to-business (B2B) marketing has grown considerably in the past four decades. It was a highly dynamic discipline in the 1970s and 1980s, when new knowledge was being intensively exchanged among an increasing number of B2B researchers. Since that time, the pace of development has slowed, and diversification in the discipline manifested itself in a distinctive number of core research subfields (Backhaus et al. 2011). The work of the Industrial Marketing and Purchasing (IMP) Group has left impressive marks on the research field of industrial marketing. Its influence and development over the last 30 years is well recognized in connection with the thoughts of a general theory of business marketing (Wuehrer and Smejkal 2013).

The beginnings of IMP research go back to mid-1970s. Business-oriented, mainly European researchers have thoroughly analyzed the practices of organizations in the market. One of the first results of these studies was published by Håkansson and Östberg (1975) in their article in *Industrial Marketing Management*. By the mid 1970's, the results of European empirical research had led to the recognition that the relationship between the supplier and the customer is a complex phenomenon rather than a separate study of purchasing behavior and marketing. Indeed, it is important to ascertain the interactions between two parties in the relationship between the seller and the buyer (Håkansson 1982, Turnbull et al., 1996). These research experiences led to the establishment of the Industrial Marketing and Purchasing (IMP) Group in 1976.

Since 1984, the IMP Group has annually served as a forum for scholars in business to business around the issues of industrial business and marketing. This Annual IMP conference has had a major influence on research in industrial business, business to business marketing and purchasing, with publications in some of the best recognized academic journals in the field as well as in *IMP Journal*, the community academic journal.

A few bibliometric studies have been released in the field (Wuehrer & Smejkal, 2013) as well as some analyses of the network of scholars IMP constitutes (Morlacchi et al., 2005; Henneberg et al., 2009). Wuehrer & Smejkal, (2013) carried out a longitudinal content-based analysis of 28 IMP conferences, between 1984 and 2012. They used a semi-automated software analysis tool called Leximancer. The authors apply bibliometric analysis of conference proceedings to identify both, evolving and stagnating research topics. Conference paper's key words and the themes that these key words represent are in the focus of their analysis. One of their research questions is "how similar (or not) is the structure of the conferences' keyword co-occurrences (1984 to 2012) of the IMP Group from a bibliometric point of view?" (Wuehrer & Smejkal, 2013:143). They studied 3109 papers available for analysis on the basis of research on IMP homepage and on University of Manchester Archive. They found that the development over time shows that the number of papers of the IMP conference has increased from 21 papers in 1984, 55 in 1991, 70 in 1998, 130 in 2005, and 158 in 2012. The mean of contributions per year is 111.8, rounded up to 112 papers (Wuehrer & Smejkal, 2013). In their longitudinal analysis of the key words the authors found that in the beginning of the IMP conferences (between 1984-1988) 'market', 'firm' and 'relationship' were the main key words. Since 1988 "onwards the

keyword ‘relationship’ and its specific co-occurrences coin the contributions, presentations and most probably the discussions among the participants” (Wuehrer & Smejkal, 2013:148).

Two deep analysis using by the Social Network Analysis have been recently accomplished (Morlacchi et al 2005, Henneberg et al. 2009) Both focused on the investigation of the degree of co-publishing that has taken place between this group of researchers. Morlacchi et al (2005)’ results reveal a power law distribution of paper co-authorship and a small world network that conforms to the results of studies of other types of social networks and they identified a core network of 57 researchers. The authors state that “the role and importance of the founding fathers (and they are all men) is obvious” (Morlacchi et al. 2005:24). Henneberg et al. (2009) have found the small world of three of the original ‘founding fathers’ of the IMP. However, there is a certain vulnerability of the IMP network. The retirement of key researchers, who act as important bridges connecting different parts of the network, could have significant impact on the functioning of the IMP (Morlacchi et al. 2005).

Håkansson and Gadde (2018) analyzed the development of four decades of IMP research, based on mainly conference papers but also other IMP publications as books and academic articles between 1984 and 2012. They have distinguished two main periods, from 1984 to 1998 and from 1998 to 2012. They have analyzed the publication from the point of view of their culminated citations in 2013. They “also analyzed the research themes covered in the publications and the development of these themes over time through detailed examination of abstracts and, in some cases, the full text” (Håkansson and Gadde 2018:9). The authors describe the evolvement of IMP as of activities, resources and actors over that two time periods. For this description they use three IMP conferences (1984 in Manchester, 1998 in Turku and 2012 in Rome) as references. The goal of their study is to describe and to analyze the development of the IMP research network. The paper shows how IMP has evolved into a research network around common themes of which business relationships and networks are the most significant.

In this sense, the research of Håkansson and Gadde (2018), using a different methodology than Morlacchi et al (2005) and Henneberg et al. (2009) still focuses on the relationship between researchers and their development. From our research point of view, it means that these publications content huge contribution to understand IMP scientific activities they are not primarily focused on research themes.

This project however has two different goals: first of all, to analyze the structure of IMP research in terms of content. This means understanding the driving forces leading IMP thought. Second of all, in a longitudinal approach, identify past, present and future tendencies of research in IMP Group.

## **Methodology**

The aim of this paper is to understand the research themes on which the IMP research group focuses. Rather than use the term “theme,” however, we approach our research object through the idea of *contextual fields*<sup>1</sup>. The advantage of using this latter term is that it is clearly defined

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<sup>1</sup> In an earlier study, we chose *conceptual field* to translate Reinert’s term (Mandjak et al. 2018). We have come back to a more literal translation of *contextual field* that recalls the fact the software uses a word’s context to classify it into classes.

and underpinned by linguistic hypotheses. The underlying linguistic hypotheses are the following:

- 1) words with elaborate semantic content, such as nouns, verbs, adjectives, and adverbs can be used to understand the main theme of a text. For simplicity, we call them *content words*, although all words have content;
- 2) content words that are within a certain distance of each other are more strongly linked;
- 3) the context of a word is necessary for its interpreting its meaning;
- 4) the basic unit of contextual analysis is the proposition, such as *the sky is blue*. A proposition is composed of the *support*, what is being spoken about, *the sky*, and the *apport*, the information given about the support, in this case, *is blue*;
- 5) propositions are usually only a few lines of text;
- 6) the repeated linking of content words in the propositions of a corpus means that the corpus contains a certain contextual field.

It is important to note that lexical fields are logically linked, i.e., the lexical unit *chair* is logically linked to the lexical unit *table*. These units are part of the lexical field of *furniture*. A contextual field, however, emerges from a corpus (Reinert 1990). There is not necessarily a preexisting logical link between the content words in a contextual field. For example, a corpus of literary criticism of Ionesco's *Les chaises* may show a contextual field linking the unit *chair* with the unit *wait*. This contextual field emerges from the specific corpus and is not necessarily transferable to another corpus, which contains the concept of *chair*.

Lexicometric software such as Iramuteq and Alceste detect contextual fields using statistical calculation of the presence, the frequency, the proximity, and the reoccurrence of proximity between content words. For this study, we chose to use the software Iramuteq, which is an open software and has been used for various studies in Management Science (Mandjak et al. 2018; Chanel et al. 2014; Guerrero et al. 2008; Mathieu and Roehrich 2005; Plumecocq 2014).

The value of this methodology is an automated contextual

field identification. The automation allows for robust reliability in the determination of contextual fields as these do not depend on classifying words, sentences, or paragraphs into predetermined categories as do some methods of non-automated content analysis (Abhayawansa, 2011; Weber 1990). The number of texts that can be analyzed also is larger, as automated analysis allows for a great reduction in the time necessary for determining categories and coding the corpus (Illia et al., 2014).

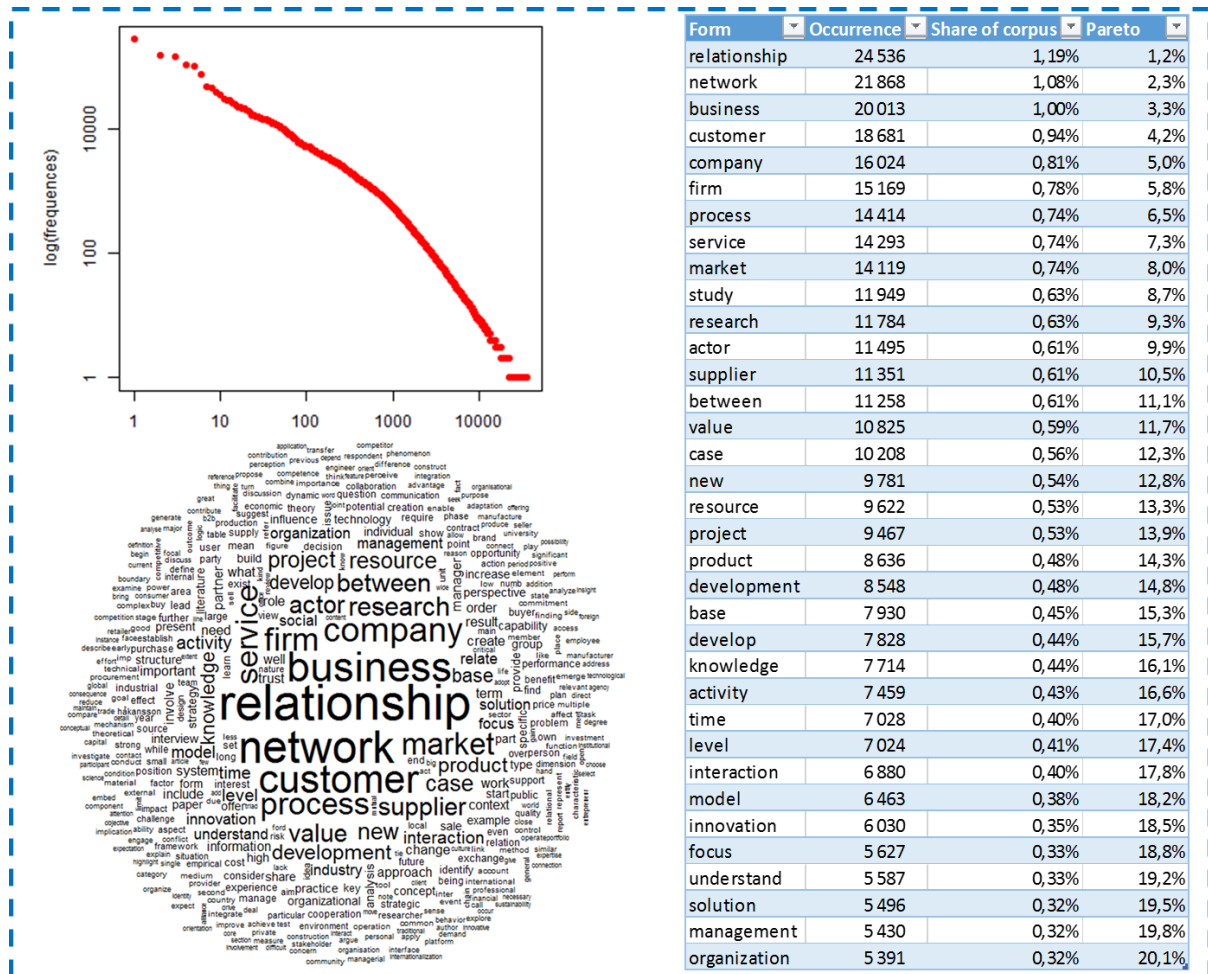
Expanding on the work of Wuehrer & Smejkal, who analyzed the IMP conference papers from 1984-2012, we analyze the contextual fields that emerge from the conference papers of the IMP conferences during the years 2013 (Atlanta), 2014 (Bordeaux), 2015 (Kolding) and 2016 (Poznan). A total of 599 conference papers were included in this study. The corpus included their abstract and text. These papers were collected from the files distributed on USB drives during the conferences.

For our analysis of the IMP papers from the 2013 to 2016 conferences, the following procedure was applied:

- 1) Preparation of corpus: coding metadata including the author and the year of the conference; excluding all characters excepts a-z, 1-9, the underscore sign and the asterisk for codes;
- 2) Lemmatization: in this step, the software compiles a list of *active forms* that include root forms of nouns, verbs, adjectives, and adverbs. These roots represent the variations of the forms. For example, the active form *woman* represents both the singular *woman* and the plural *women* occurrences of this form; grammatical words, such as the article *a* and *the* are excluded and placed in the *supplementary forms* category. Words that occur only once are also excluded and placed in the *hapax* list; finally, this step allows the researcher to know what the frequency of each active form is in the corpus;
- 3) Similitude analysis: Similitude analysis is based on graph theory, a technique that was used in sociology to understand social representations (Marchand & Ratinaud, 2012; Flament, 1962; Flament, 1981; Vergès & Bouriche, 2001). For corpora, this analysis allows the researcher to represent words that form subgroups in a specific corpus, while still visualizing how the subgroups are related in the whole corpus. We used calculation of co-occurrence and the Fruchterman Reingold algorithm for our corpus.
- 4) Reinert and AFC analyses: The Reinert analysis uses hierarchically descending classification to create homogenous classes of content words according to their context (Reinert, 1990). The corpus is segmented into units of context, in general, the length of a standard proposition. The analysis iteratively divides the segmented corpus into two sections, until the majority of the segments have been classified into homogenous classes, according to their  $X^2$  calculations. This analysis is the basis for the factorial correspondence analysis (AFC) that creates contextual fields that are distributed on two factorial axes.
- 5) Graphic representation of word frequency (word cloud) in the work of the “Founding Fathers” who participated in these latter IMP conferences.

## Analysis

The corpus of papers presented in these IMP conferences is composed of 599 papers (year 2013: 136; year 2014: 160; year 2015: 151; year 2016: 152). These papers represent more than 4 million occurrences (i.e. active words) with 35 801 forms from which 13 119 are hapax (single use in the corpus). These hapaxes represent 0,32% of occurrences but 36,64% of forms. Among the active forms, 35 forms represent 20% of occurrences. This means that 35 words are representative of one fifth of what was written for the conference IMP. (Figure 1.). The top form is Relationship.

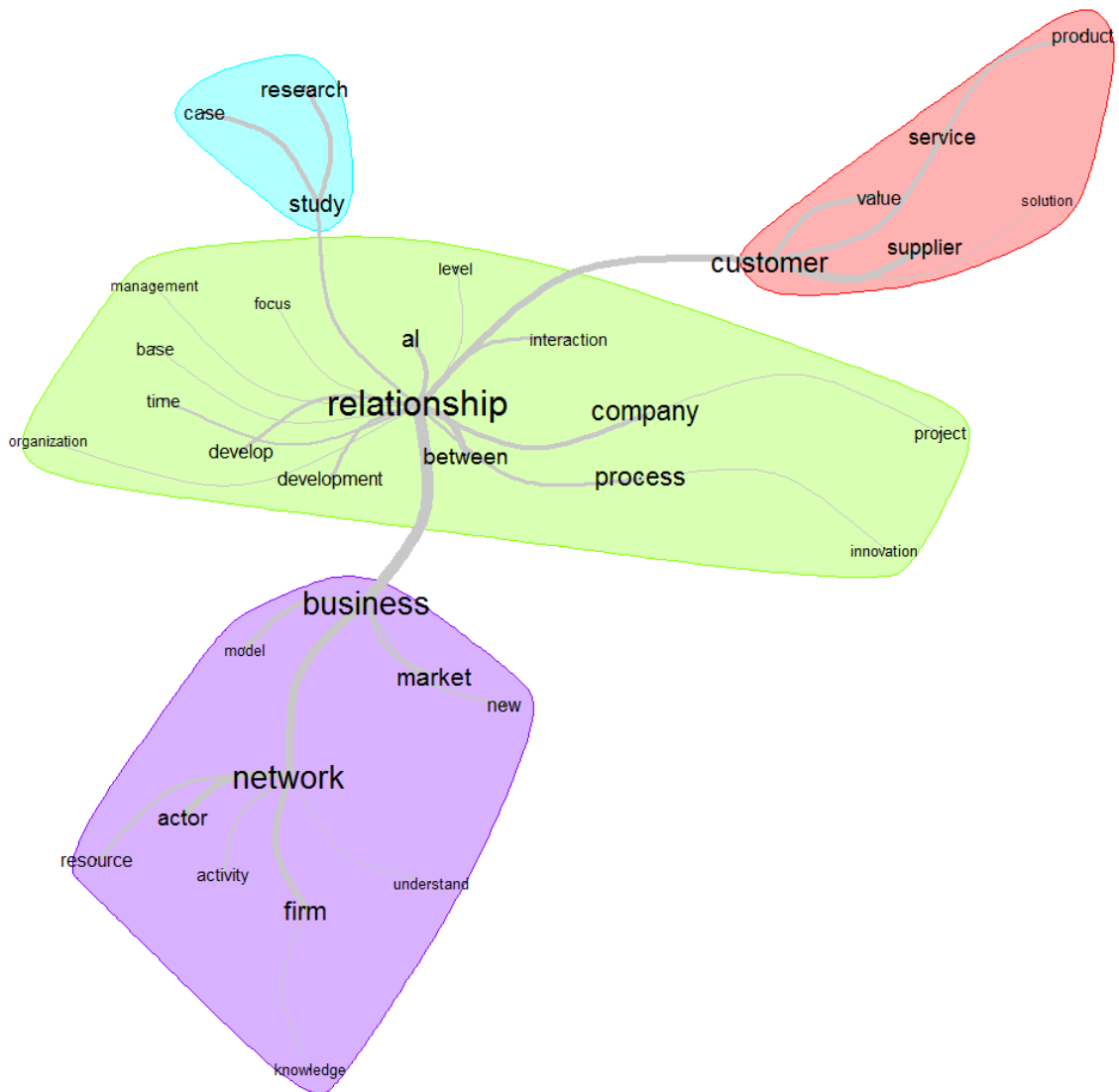


**Figure 1. Main forms of the corpus and their distribution**

Source: Authors' elaboration based on IRaMuteQ, 2018

Beyond the frequency of use of these 35 most important forms of the corpus, what is at stake is the relationship they have with each other. The similitude analysis shows the density of relationship between the concepts and also it creates groups of concepts that are close together. Figure 2. Shows the central role of relationship with three main groups being more distinctive. *Relationship* is close to *company* because it is what IMP is about: relationship between companies. The following forms are interesting because they carry the same idea of characterizing the relationship: *process*, *development*, *interaction*. Furthermore, there are elements of modelization of the relationship with *time* and *level*. Concepts of business such as management (of the relationship), innovation (through relationship), projects, and organization remain in the same group as Relationship, but appear at the margin. This group shows that the central approach of business of IMP is through the process of relationship.

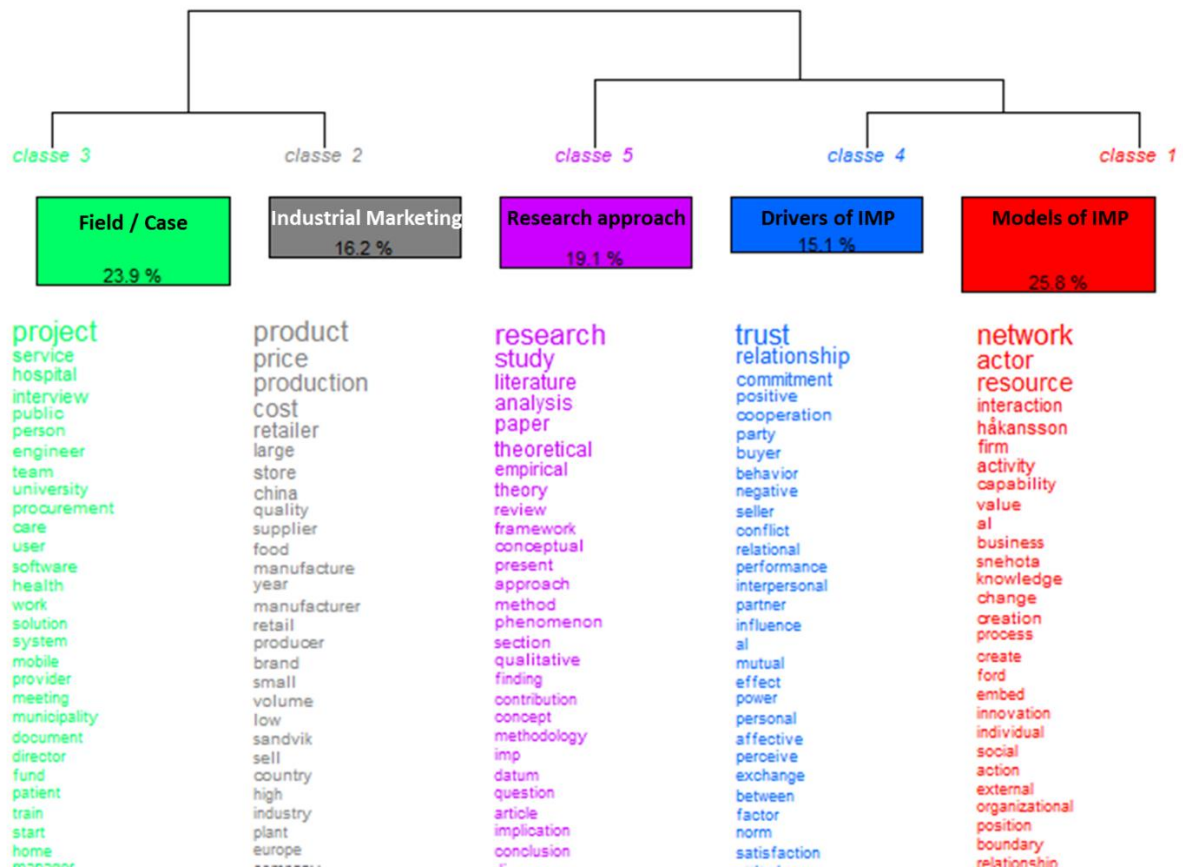
From this central group three independent groups emerge: first a group with *study*, *research* and *case*. This group highlights the importance of case studies in the IMP research approach. Another group, the second major one revolves around the form *business network*. *Market*, which is the lemma of marketing, is in this group. We can find also together the *actor-resource-activity* trio. The third group gathers some more traditional marketing concepts such as *customer*, *supplier*, *value*, *service*, *product* and *solution*. What is interesting is the distance of these concepts with the concepts of business network.



**Figure 2. Four groups of the similitude analysis**

Source: Authors' elaboration based on IRaMuteQ, 2018

Reinert and AFC analyses generate groups of words into dendrograms (Figure 3). The analysis of our corpus shows two main groups of categories. First, there is a group with Classes 1, Class 4 and Class 5 representing IMP fundamentals. Class 1 (the first one to be distinct from the rest of the corpus in the iterative process) gathers forms related to IMP models (*ARA, Network, Interaction, etc.*); Class 4 gathers forms related to IMP drivers such as *trust, relationship, commitment, etc.*; Class 5 gathers forms related to the process of research (*study, literature, analysis, theoretical, empirical, etc.*). Second, there is a group with Class 2 and Class 3 representing a more classical approach of marketing. Class 2 gathering concepts of industrial marketing such as *Product, Price, Place –retail, store, Promotion( brand)*, as well as industrial elements (*producer, manufacturer, supplier, industry, etc.*) and quantitative elements (*large, small, volume, high, low*). Class 3 gathers forms related to the areas studied such as (*project marketing, service marketing, hospital marketing, and the process of managing the cases with actors (public, person, engineer, team, director, etc.) and its process (work, meeting, interview, etc.)*).



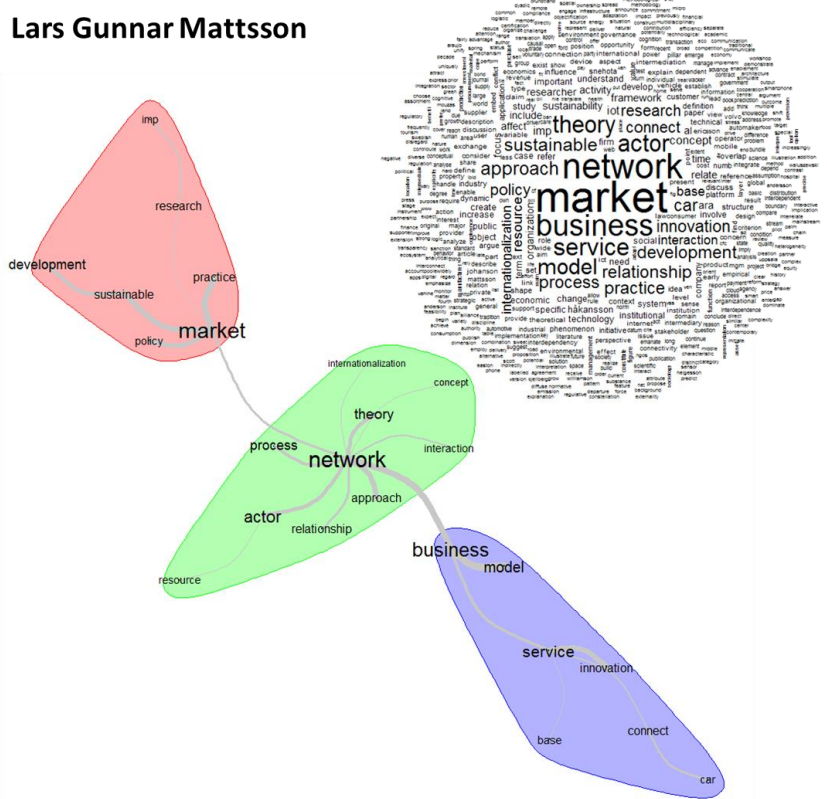
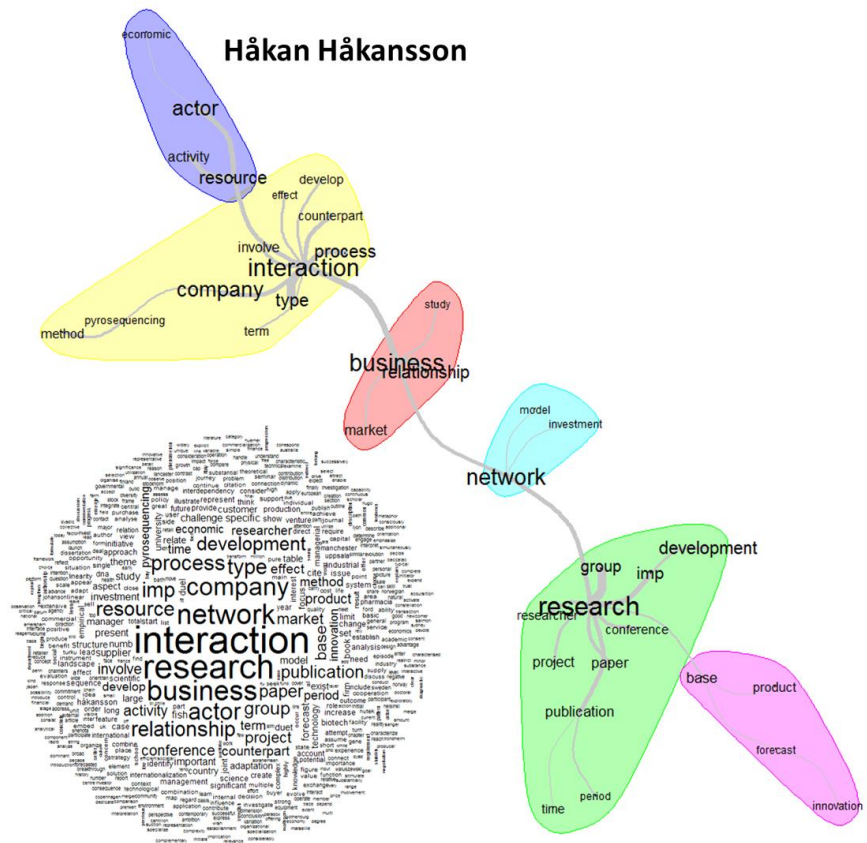
**Figure 3. Five contextual fields in two groups**

Source: Authors' elaboration based on IRaMuteQ, 2018

The factorial correspondence analysis (AFC) distributes these five classes on a two factors axes. Our interpretation of this plan (Figure 4) is that it distributes IMP contributions content on a first factor going from **abstract** concepts (theory and research) to **concrete** fields (industry and actors) and on a second factor which goes from **marketing** (industrial marketing, drivers of IMP and models of IMP) to **research** (study and field).

What is especially interesting in comparison to traditional AFC analysis is the clear separation of the four areas. There are only few concepts around the coordinate (0;0); only *organization*. This means the industry is the concrete part of marketing, the case is the concrete part of the research, methods is the abstract part of research and the theoretical part of marketing is the combination of IMP drivers and models.







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