

Charting the Reach and Contribution of IMP Literature in Other Disciplines: A Bibliometric Analysis

Heli Aramo-Immonen^a, Per Carlborga^a, Nina Haschea^a, Jari Jussila^b, Johan Kask^a, Gabriel Linton^a, Navonil Mustafee^c, and Christina Öberg^{a, d, e}

^aÖrebro University, School of Business, SE-701 82 Örebro, Sweden;

^bHäme University of Applied Sciences, Research Unit for Smart Services, P.O. Box 230, Hämeenlinna, Finland;

^cUniversity of Exeter, Centre for Simulation, Analytics and Modelling, EX4 4PU, UK;

^dThe Ratio Institute, P.O. Box 3203, SE-103 64 Stockholm, Sweden;

^eHarvard University, Weatherhead Center for International Affairs, 1737 Cambridge Street, MA 02138 Cambridge, USA;

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Abstract

The acknowledgement of a research tradition by other disciplines shows its contribution to the development of the broader body of scientific knowledge. This paper investigates the contribution of IMP (Industrial Marketing and Purchasing) research to broader research disciplines by analyzing how researchers within and beyond IMP have cited core IMP articles. First, through quantitative bibliometric analysis, the paper identifies the diffusion to other research disciplines. Thereafter, through qualitative analysis, the impact of the IMP perspective is captured to understand how strong these imprints are. The analyses show that IMP research has been noticed among a range of adjacent research disciplines. However, the use of IMP references has generally been rudimentary, and without a deeper understanding of the IMP ontology, meaning that IMP still has some “weak ties” to the other disciplines. Establishing IMP’s contribution through enduring imprints would need further engagement with researchers from other research disciplines and publications in top journals. The paper contributes empirically with how the IMP perspective has spread beyond the IMP Group and theoretically by adding insight into how research ideas travel and transform to other disciplines.

Keywords: Bibliometric; Cluster analysis; Co-citation analysis; IMP; Imprint; Travel of idea

Highlights

- Investigates the contribution of IMP research to broader research disciplines
- Analyzes how researchers within and beyond IMP have cited IMP
- Uses quantitative and qualitative analyses
- Concludes that IMP's scientific underpinning is rarely acknowledged; ideas are merely surfaced

1. Introduction

Industrial Marketing and Purchasing (IMP), as a school of thought (Sheth, Gardner, & Garret, 1988), has, for more than 40 years, developed knowledge on business-to-business (B2B) marketing interaction (Harrison & Munksgaard, 2018). Empirically grounded, yet linked to ideas on heterogeneity, interdependence, social exchanges and embeddedness (Alderson & Cox, 1948; Granovetter, 1985; Levine & White, 1961; Pfeffer & Salancik, 1978), IMP has come to contrast ideas of atomistic exchanges, discrete purchases, passive buyers and aggressive sellers, and the separation of buying and selling in marketing (Håkansson, 1982), thereby also representing a different ontology to more predestined-oriented marketing perspectives. Over the years, the IMP perspective¹ has been recognized in a range of academic outlets, including several top-ranked journals, and substantiated by more than 3,200 papers listed on the IMP website. While being built upon and further developing those core ideas of interdependencies, interactions, heterogeneity and embeddedness, it is yet unclear how the IMP perspective has been incorporated in research beyond publications recognized as part of the IMP Group.

Several overviews have been conducted to capture (1) the presence and extent of research focusing on B2B marketing (LaPlaca & Katrichis, 2009; Möller, 2013); (2) the development of the B2B marketing discipline and its related topics (e.g., Dant & Lapuka, 2008; Engwall, Pahlberg, & Persson, 2016; Hadjikhani & LaPlaca, 2013; LaPlaca, 2008; Lichtenthal, Mummalaneni, & Wilson, 2008; Möller & Halinen, 2018; Mummalaneni & Lichtenthal, 2015; Wilkinson, 2001); (3) collaborations among researchers in B2B marketing (Morlacchi, Wilkinson, & Young, 2005); (4) the influence on teaching (Backhaus, Mell, & Sabel, 2007); and (5) key topics and publications (Backhaus, Lügger, & Koch, 2011; LaPlaca, 1997), as seen in the overview in Table 1.

[Please insert Table 1 about here]

The focus on development and history in the creation of a B2B marketing domain is predominant in these overviews, focusing on a broad definition of B2B marketing containing several schools of thought, and more rarely separating these in the overviews. Analyses of topics, as well as collaborations among researchers, indicate a quite heterogeneous movement

¹ We use the IMP perspective and IMP research in this paper to capture how ideas have spread and to refer to the research conducted, respectively. Whether IMP is a theory or not has been previously discussed (Gebert-Persson, Mattsson, & Öberg, 2015), and concluded not to be so, partially based on the ontological underpinning.

of development, making it relevant to study a specific perspective (cf. Engwall et al., 2016) rather than the overall literature. IMP here contrasts other B2B marketing perspectives in its focus on interdependencies in dyads and networks, and the emphasis on how the network is limitless, contains all relevant resources, yet also means that a single party cannot act on its strategies without considering reactions and actions among others. Furthermore, most overviews focusing on developments as backward tracings of ideas and their expansions over time within B2B marketing make it relevant to consider how ideas may have come to influence other research disciplines in a forward-oriented direction.

This paper sets to explore how the IMP perspective has spread into various research disciplines and influenced these, disciplines then being broadly defined as schools of thought within and beyond marketing (cf. Sheth et al., 1988). The paper puts focus on what disciplines acknowledge the IMP perspective and how they do so, including to what extent the disciplines adopt to the IMP ontology or simply recognize its presence in the research arena. Using a combination of bibliometric quantitative and qualitative citation analyses, the purpose of this paper is *to investigate the contribution of IMP research to broader research disciplines*.

In its attempt to capture a holistic account on the travel of the IMP perspective, this paper contributes to previous research through presenting an overview on how the IMP perspective has spread beyond the IMP Group and thereby creates an example of how research ideas may influence other streams of research, yet also be transformed or reinterpreted when doing so. B2B marketing research has been characterized as having several schools of thought with some interlinked ideas (Peters, Pressey, Vanharanta, & Johnston, 2013; Sheth et al., 1988). This paper extends beyond acknowledging possible links to other B2B marketing schools of thought and thereby helps to contextualize B2B marketing and see how its ideas may lengthen beyond the marketing discipline. Theoretically, through applying the travel of ideas concept (Czarniawska & Joerges, 1996), the paper shows how such concepts may help to understand the spread of research thoughts and their possible transformation and translation.

The remainder of the paper is structured as follows: Subsequent to this introduction, we present a brief overview of what could be regarded as core IMP research, described chronologically to define roots and more recent developments. Thereafter, the theoretical framing, referring to the travel of ideas, is described as a means to understand how research perspectives could expect to develop, be contrasted and spread. The research design is then presented, focusing on the

various steps and processes of data capture and analysis. In the findings section, results from those analyses pursued are described. These are then summarized as propositions. The paper ends with conclusions, including theoretical and practical contributions, limitations and ideas for further research.

2. Theoretical departure and framing

2.1 IMP – A brief overview

IMP could both be seen as an informal group of researchers building on and developing the core research perspective characterizing the group, and as a research tradition of empirically derived research on B2B interaction (Ford & Håkansson, 2006b). An early, yet important, output marking a starting point for IMP was a licentiate thesis on the Swedish steel industry (Johanson, 1966) realizing the contrast between theories on discrete exchanges and the empirically observed longevity of business relationships. This thesis was followed by a number of doctoral works subsequently coming together in what was referred to as IMP1, also manifesting how similar ideas had reached ground at Swedish, but also British, French, Italian and German universities (Håkansson, 1982; Turnbull & Valla, 1986), then focusing on internationalization (IMP originally meaning *International Marketing and Purchasing*). Outcomes of this research were how transactions between companies could not be regarded as disconnected exchanges, but as interactions between parties embedded in time, repetition and commitment. These interactions include social, informational and technological exchanges (Ford, Berthon, Brown, Gadde, Håkansson, Naudé, Ritter, & Snehota, 2003; Hammarkvist, Håkansson, & Mattsson, 1982), and the interaction model describing dyadic relationships between buyers and sellers (Ford & Håkansson, 2006a; Håkansson, 1982; Håkansson & Östberg, 1975) was developed as a key model.

Continuing on these outcomes, IMP2, as a subsequent international project, focused on interdependencies and interconnectivities on network levels (Anderson, Håkansson, & Johanson, 1994; Hägg & Johanson, 1982), IMP1 thus emphasizing the dyadic construct. The ARA (activity, resource, actor) model (Håkansson & Snehota, 1989, 1995) became a key output. The interconnectivity brought adaptation, reactions and the difficulty of pursuing a single-company strategic agenda to the forefront (Baraldi, Brennan, Harrison, Tunisini, & Zolkiewski, 2007; Gadde, Huemer, & Håkansson, 2003; Halinen, Salmi, & Havila, 1999; Hallén, Johanson, & Seyed-Mohamed, 1991; Möller & Halinen, 1999; Öberg, Shih, & Chou, 2016), as the interaction between any two parties would also affect other parties and

relationships (Halinen & Törnroos, 1998). Based on how companies are dependent on these other parties, constraints become evident in what can be accomplished and how. The stability and change (Gadde & Mattsson, 1987) in interactions emphasize this point: how developments – innovations, new ways of interacting, new offerings – rather occur within given business relationships and as an adaptation than as ideas from the “outside”. Any business relationship would be in the state of flux, experiencing developments within it, while creating a sense of stability as the relationship continues over time. The adaptation between parties, in turn, leads to, but also follows from the heterogeneity of firms and offerings, meaning that a party or offering cannot easily be exchanged for another.

With the emphasis on interaction, interdependence, embeddedness, and heterogeneity, IMP has found its roots in buying behavior, behavioral science and various veins of sociology research along with the sense-making literature among others (Aramo-Immonen, Carlborg, Geissinger, Hasche, Kask, Lagin, Linton, Öberg, Nykvist, Pelgander, Shahin Moghadam, Shams, Jussila, & Mustafee, 2018), and with characterizing traits vis-à-vis related areas of research (Axelsson & Easton, 1992; Hadjikhani & LaPlaca, 2013; Peters et al., 2013) in emphasizing the complexities, the interactions rather than individual parties’ abilities to operate in business markets, and the description of developments from “within” (the relationship being the starting point rather than the outcome). As such, IMP could well be regarded as a viewpoint, scientific thought or perspective rather than a theory (cf. Gebert-Persson et al., 2015), also based on its limited normative and positivistic descriptions of managerialism and foreseeable outcomes (cf. Wacker, 1998), and we here refer to it as the *IMP perspective* rather than scientific thought or theory. Again, this means that the IMP perspective includes those assumptions on how everything is linked and thereby affects businesses (Håkansson & Snehota, 1989) and not merely descriptions about networks as such, hence forwarding an ontology quite different to other research also within B2B marketing.

2.2 The travel of ideas

With the means to investigate how IMP research contributes to broader research disciplines, the travel of ideas conceptualization (Czarniawska & Joerges, 1996; Czarniawska & Sevón, 1996; Engwall, 2003; Sahlin & Wedlin, 2008; Suárez & Bromley, 2016) functions as a framing. This theoretical conceptualization, operationalized in institutional studies, emphasizes how ideas are spread in the context of other ideas, traditions, parties, and institutions (Sahlin & Wedlin, 2008). While practiced in organizational research emphasizing this last aspect –

institutions – the travel of ideas could well be used to understand how theoretical constructs and research perspectives are spread and attract influence in other disciplines as the conceptualization creates understandings for spreads, but also transformations and modifications of ideas.

The principal idea is that “successful” (Engwall, 2003; Haveman, 1993) ideas are imitated by others as a signal of belonging and that when a number of parties act in a similar way, they create a reference system for others to relate to. In the study of how ideas, such as the IMP perspective, spread, this allows us to understand the idea as dependent on certain scholars operating in a specific context and speaking their meaning through identified research outlets. Again, the contextualization of parties, and the other ideas they carry and associate with, may mean that ideas are modified to various extents. This means that ideas transform rather than transfer, as the ideas are translated into specific contexts and time (cf. Suárez & Bromley, 2016). Furthermore, parties may challenge ideas with the aim to maintain their current ones (Sahlin & Wedlin, 2008) and based on how they are distantly “located” to those ideas developing into dominating thoughts in processes of transferring, transforming, and translating (Czarniawska & Joerges, 1996). The tension between the imitation of ideas and those challenging these ideas with aims to maintain current ones, or to create uniqueness, may mean that original ideas are completely altered (Sahlin & Wedlin, 2008). The travel of ideas thereby emphasizes “reconstruction and co-construction of external models and local adaptations” (Suárez & Bromley, 2016, p. 145).

In the investigation of the contribution of IMP research to broader research disciplines, this paper thus draws attention to what disciplines acknowledge the IMP perspective, and how they do so. This latter aspect may include how ideas are transferred, transformed and translated (Czarniawska & Joerges, 1996), yet also how they are challenged, and furthermore the depth of grasping or surfacing the IMP perspective, including the acknowledgment and deployment of its ontological idea, or simply the recognition of its existence as a research perspective.

3. Research design

The research design consists of a number of data capturing methods and analyses, as outlined below and summarized in Table 2.

[Please insert Table 2 about here]

3.1 Defining the core of the IMP perspective

The set of the most central articles representing the core of the IMP perspective was selected through three steps: Firstly (1a in Table 2, and detailed in Table 3), the *Web of Science's (WoS)* database was used to establish a raw list of peer-reviewed articles widely defined as IMP research. We used three different search strategies: searches based on keywords, searches based on the names of IMP scholars (recurrent names found on the IMP webpage, the IMP boards, special interest groups, the *IMP Journal*, and recent IMP events; cf. Möller & Halinen, 2018), and searches for articles published in the special issues from IMP conferences. Publications in the *WoS* category “business” were included to focus on IMP’s domicile. After these three different searches were completed, the output was combined, and duplicates were removed. It was a conscious choice for the initial step to trawl extensively, rather than risk missing any important publications. The uninvited objects were instead sorted out in the following steps. Complementary analyses using the same procedure were performed using *Scopus* as a point of departure, so as to verify the *WoS* results.

[Please insert Table 3 about here]

The raw list was first shortened to only articles published in marketing journals (according to the ABS journal ranking list) or in *Journal of Business Research*, which has long been considered a central journal for IMP scholars (cf. LaPlaca & Katrichis, 2009). This was done in order to exclude works that use the same keywords but with a non-IMP denotation, and works written by IMP scholars not building on the IMP perspective in the specific publications. The focus on only marketing journals (rather than any type of journal) also means that we see any articles in other disciplines (such as innovation) produced by scholars basing their research on the IMP perspective as a travel of ideas, which would be captured in the subsequent co-citation analyses. From the reduced raw list, a total of 34 articles representing all articles with more than 100 *WoS* citations were shortlisted as top-influential pillars of the IMP perspective. In order to validate that no central IMP articles were omitted, a set of alternative searches was made, including searches with additional keywords as well as searches with other scholars, but no more articles met the inclusion criteria. To further verify and sharpen the core, we compared the 34 IMP articles to the listing of the most influential IMP scholars’ top-cited articles compiled in Möller and Halinen (2018)², resulting in a list of 11 articles. A qualitative analysis

² Möller and Halinen (2018) used a list of the 22 core IMP scholars’ publications and their 25 most-cited articles from 1980 to 2006.

of those articles only appearing on either list was conducted to ensure that they should really be excluded, and pointed at how these were either about internationalization or service research, again rather a spread of ideas³ than the core of IMP. The qualitative analysis was also performed on the eleven articles and resulted in how the two method articles (Dubois & Gadde, 2002; Halinen & Törnroos, 2005) were excluded since they have a broader scope than IMP only. Our idea was to create a core that unquestionably could be seen as IMP, and then expectedly also have IMP articles as one of the resulting clusters. Through also comparing our findings with similar analyses being run on a larger set of articles, but without including the qualitative analysis of them, we could clearly see how a larger core led to less distinct clusters and how, for instance, service research focusing on relationships and networks while not adopting the IMP perspective blurred the core. Table 4 presents the final core.

[Please insert Table 4 about here]

Indisputably, IMP research, and particularly its early development, was presented as books and book chapters (cf. Möller & Halinen, 2018), and exclusion of such is a bias in our core. The practical reason for such an exclusion had to do with how the books and book chapters do not appear in any databases (neither *WoS* nor *Scopus*) and would therefore not be possible to capture for citation and co-citation analyses. *Google Scholar* indeed includes these, but is blurred by non-research publications which would have affected our analysis negatively. Furthermore, articles citing the books, but not including any of the core articles would not be assumed to actually build on the IMP perspective, but only be found in such clusters surfacing the IMP research or recognizing its existence while not building on it (see the Findings and analysis section), thus minimizing the expected impact on findings of the exclusion of books and book chapters. Through searches using *Google Scholar*, we have also observed how the reference to the books decreases over the years.

3.2 Citation analyses

The cited reference data of the nine core IMP articles was extracted from *WoS*, resulting in 2,532 articles that cite the nine core IMP articles. The full records and cited references of these 2,532 articles were imported to *CiteSpace* and *VOSviewer* for analyses. *CiteSpace* is a software

³ International business, according to the Uppsala School, developed much in parallel and with overlapping scholars to IMP but is treated as outside IMP in our definition of core, yet with ideas carried forward to and from IMP.

application for detecting and visualizing trends and patterns in the scientific literature (Chen, 2006), while *VOSviewer* is a software application for constructing and visualizing bibliometric networks (van Eck & Waltman, 2009, 2017), such as co-citation analyses.

Co-citation analysis identifies references that occur in the reference list of two or more citing articles, with the resultant network providing insights into the constituents of a knowledge domain. Let us take an example where there are three articles (A1, A2, and A3), each of which cites two articles (B1, B2). Even though B1 and B2 may not directly cite each other, B1 and B2 form a kind of semantic cluster since A1, A2, and A3 all cite B1 and B2. B1 and B2 are, therefore, related by co-citation (Mustafee, Katsaliaki & Fishwick, 2014). If again, there are even more than the example's three articles (A1-A3) citing the same articles (B1-B2 in the example), the strength of the cluster's ties would be a stronger indication of the cluster, while the number of times the articles are cited (B1-B2) would indicate their overall influence. The advantage of co-citation analysis is that it has the potential to identify important articles, authors, and journals that could have been overlooked if only conventional citation analysis techniques were used. More importantly, it has the capacity to identify clusters of research output that would relate to the same idea or theoretical underpinning. Thus, complementing traditional citation-based metrics with co-citation analysis is arguably a superior approach for identifying articles that hold promise and which represent the grounded knowledge base of a discipline (Mustafee, Bessis, Taylor, Hou & Matthew, 2019). Apart from its benefits, Hicks (1987) presents a critique of co-citation analysis and identifies limitations such as the delayed inception of clusters, inconsistencies in coverage of the time, subjectivity and underrepresentation of experimental work. However, the author also states that with further development of this method, some of the limitations would be reduced. Considering that the Hicks article is over 30 years old and based on more advanced tools for co-citation analyses with less manual work and more complete databases of articles, several of those flaws have been omitted or reduced in impact (Mustafee et al., 2019; van Eck & Waltman, 2017), and for IMP research the underrepresentation of experimental work would be negligible.

The first citation analysis of our paper consisted of the research disciplines of the 2,532 articles, disciplines defined by *WoS*. This data, being descriptive and also including how an article may well appear in several disciplines, gave a first indication of the extent of spread (see Table 5 below). Fine-tuning this, we thereafter analyzed the journals in which the 2,532 articles appeared, an analysis that in contrast to the first excluded any possible double disciplines and

also pointed out which research discipline the authors intended to contribute to (see Figure 1 for results). While the first analysis used *VOSviewer*, this analysis used *CiteSpace*, which allowed for the analysis of co-citations among the 2,532 articles related to the journals. In the co-citation of analysis of journals, the nodes are the journals, and the links represent the association between the journals in terms of whether and how articles in one journal refer to articles in another journal. For this analysis, and to deal with the critique of Hicks (1987), we also divided the time interval of analysis into multiple time slices (this is indicated by the VIBGYOR spectrum comprised of colors representing specific time periods in Figure 1). We then used a pathfinding algorithm for pruning individual networks (specific to each time slice) and selected the *CiteSpace* options to show the merged network of journal representations. We could thereby conclude not only which journals include articles referring to the IMP core, but also the interplay among these journals in terms of co-citations as time-based developments. This step included a qualitative comparison of the journals in which the core IMP articles were published, along with a discipline recognition of the journals in which the 2,532 citing journals were published (using the categories in the *ABS ranking list*).

We further performed a co-citation keyword analysis to figure out frequent phenomena of interest in the research citing the IMP core (see Figure 2). This analysis departed from the keywords as given by the authors in the 2,532 articles. The keywords were clustered based on the 2,532 articles' co-citations. The intention with this analysis was to capture empirical as well as theoretical concepts and spur underlying research disciplines that linked to the IMP research, while shedding light on those phenomena that were explained or linked to the IMP core in the research.

The last type of co-citation analysis, and which links directly to the qualitative analysis described below, was the one focusing on the 2,532 journal articles as such. The 2,532 articles were clustered based on co-citations and depicted using *CiteViewer* (see Figure 3) in a visual analysis of articles with frequent or separate references defining the clusters. These clusters were defined to conclude their relevance and the research they represented. Relevance would here mean that the clusters could be understood as containing similar ideas, phenomena, or researchers, and were qualitatively defined using a combination of background knowledge, abstracts, and descriptions of schools of thought as established in previous research (Peters et al., 2013; Sheth et al., 1988). This part of the analysis also established the extent of within-IMP citation of the core.

3.3 Understanding how the IMP perspective is included in citing papers

To grasp *how* the IMP core is referred to and thereby establish the potential modification of ideas or opposition to them (Czarniawska & Joerges, 1996), and whether IMP is only referred to in passing or taken as a point of departure, a qualitative analysis was performed of the three most-cited articles in each cluster retrieved from the last co-citation analysis (ten clusters defined in the co-citation of articles analysis; see Figure 3 and Table 6). The choice of highly cited articles was a means to define important articles in each cluster based on their impact, and to capture the potential bridging to further spreads (here referred to as waves of citations). Thirty articles were thereby downloaded, and the reference list of each article was compared with the list of the nine core articles so as to see which of the core articles each article cited. All hits referring to the same core article in each of the articles were counted as one way of indicating the importance of the reference. The articles were then read in depth to decide how the core articles were used in the articles. An empirical categorization emerged from this reading, which focused on what ideas were referred to, how they were so, and in which part of the articles the IMP perspective (or any transformation of it) came forth (see Table 6). Thereafter, the empirically derived categories were reduced through comparisons among them and related to the travel of ideas concept so as to determine patterns explaining the extent to which the IMP perspective was recognized in the citing articles.

Next, to capture how, and if, the IMP perspective had travelled further, we selected the five articles that fully or partially based their research on IMP according to the first-wave (Table 6) analysis, to see whether they carried the perspective forward through the work citing them as a second wave of citing. For each of the five articles, we followed the same procedure as we did with the thirty analyzed articles; the three⁴ most-cited articles citing the five articles fully or partly basing their research on IMP were analyzed to see how influential articles in this second wave dealt with the IMP perspective. The reason for focusing on the particular articles from the first wave that indeed explored the IMP perspective was that it would not be likely that an article only surfacing the IMP perspective would carry the depth of the IMP further, while articles going into depth with the IMP perspective might well do so.

⁴ Articles in the first wave that returned as top-cited articles in the second wave were excluded from this analysis and replaced by the next article in terms of the number of citations.

4. Findings and analysis

4.1 Width of spread

To see how the core articles were cited, we firstly investigated the disciplines of the 2,532 citing articles. Table 5 summarizes this based on disciplines in *WoS*. As can be read from Table 5, most citations are found in the business and management disciplines, where those articles constituting the core can also be found. Other disciplines citing the core are connected with these, either as other management disciplines (such as operations management and business finance) or as disciplines where the roots to IMP can be found (e.g., economics, sociology and psychology). This latter aspect indicates how the IMP perspective may feed back to disciplines earlier referred to (cf. Håkansson, 1982). Additionally, the disciplines in Table 5 include sector studies, such as food science, hospitality, regional planning, and environmental/sustainability, thus meaning that the research is published related to a specific empiric phenomenon rather than to its (theoretical) perspective.

[Please insert Table 5 about here]

While the discipline analysis provides some initial indications about how the IMP perspective has spread, we next analyzed the journals of the 2,532 citing articles; see Figure 1. Figure 1, more than the discipline analysis, reveals that most articles are published in various marketing journals, including *Industrial Marketing Management* as the main journal, followed by *Journal of Business Research* and *Journal of Marketing*. *Industrial Marketing Management* and *Journal of Business Research* would also be those *WoS* journals including the most IMP articles, while *Journal of Marketing* includes two of the most-cited IMP articles (Anderson et al., 1994; Hallén et al., 1991). The appearances in *Journal of Marketing* and *Industrial Marketing Management* are initial indications of how the IMP perspective has received notable recognition within marketing. *Industrial Marketing Management* can be seen as a top journal within B2B marketing, while *Journal of Marketing* is a marketing journal that, to a high degree, presents research that builds on a different (and often contradictory) ontology to the IMP perspective.

[Please insert Figure 1 about here]

Outside the marketing discipline but still within business/management (cf. Table 5), most other main journals are major outlets (high impact factor/highly ranked journals) in management, including *Academy of Management Review* and *Strategic Management Journal*. B2B marketing

has a heavier connection to the management area than consumer marketing research does, which makes this link quite expected. The analysis of journals thereby suggests that most articles are published in journals belonging to two expected disciplines: marketing and management. The journal analysis does not indicate any feedback to sourcing theories beyond these, as no pure psychological or sociological journals are included in the findings. The pattern of spread thus points at a within-disciplinary dominance, including subsequent IMP articles, and some spread to neighboring disciplines. The latter again suggests a recognition beyond the marketing area, but that ideas are not carried forth to extensively new areas.

4.2 Depth of spread

To capture how the IMP perspective is incorporated in the research, we performed a quantitative analysis of keywords to grasp an overall view of the content in the citing articles (see Figure 2). As Figure 2 indicates, the literature referring to the IMP core articles tends to focus on such subjects as innovation, networks, and trust. The subject-related keywords indicate both concepts frequently described and seen as core ideas of IMP (networks, trust, commitment, business relationships) and empirical phenomena often studied in IMP research (e.g., innovation). A few keywords, to broaden the circle somewhat, indicate clear schools of thought in marketing, dominated by relationship marketing as a keyword, hence giving a first indication of how the articles citing the core somewhat extend beyond IMP.

The clusters (marked by different colors) in Figure 2 thereby give a first indication of how the keywords are linked to different marketing and neighboring schools of thought (cf. Sheth et al., 1988), such as the IMP cluster (green), the relationship marketing/service cluster (red), and the entrepreneurship cluster (blue), thus also pointing to how the keyword cluster analysis has a representative meaning to different schools of thought. Interesting, based on the defined clusters, is how this analysis already points at how different ontological views are represented in the citing data: the acknowledgment of relationships and networks being present, but the determinism in controls of relationships, more normative prescriptions, and the focus on single players and alliance-like collaborations in relationship marketing being acknowledged, compared to IMP's unbounded idea of networks and emphasis on interconnectivity. Again, this denotes how the literature beyond the IMP internal citations may only surface concepts or acknowledge parallel (or competing) research streams while focusing on school-specific interpretations of concepts (cf. Sahlin & Wedlin, 2008 on debates challenging ideas).

[Please insert Figure 2 about here]

Looking at the spread of IMP research from a different angle, by studying the co-citation analysis of the articles (see Figure 3), a similar, but more detailed pattern emerges. As Figure 3 indicates, there is again, and not at all surprisingly, one IMP cluster (green), with such scholars as Håkansson and Gadde being present. Secondly, there is a service research cluster (light green), and one focusing on international business (blue). The service research and international business clusters are located close to the IMP cluster in Figure 3, also indicating the mutual interplay of ideas. Such interplay though comes forth in two different ways: the international business literature mutually influencing and recognizing the IMP research and interlinking also on the level of scholars; and the service research which has been somewhat criticized by IMP scholars (Ford, 2011), yet borrowed ideas from IMP and also more lately been combined with IMP research.

Beyond the imprints in international business and service research, the IMP perspective seems to have travelled to other disciplines to some extent (see Figure 3), such as network governance research (e.g., Provan & Kenis, 2008); partner cooperation and strategic alliances (e.g., Das & Teng, 1998), demarking an American research tradition; innovation and entrepreneurship (purple cluster; Pittaway, Robertson, Munir, Denyer, & Neely, 2004; Walter, Auer, & Ritter, 2006); and IMP scholars that combine the IMP perspective with influences from other disciplines to publish in these. In addition to IMP scholars acting in other disciplines, Figure 3 indicates a distance (few links between the clusters and the IMP cluster in the figure) between these disciplines and IMP, pointing at how ideas are not extensively exchanged between the disciplines, while still showing a recognition of IMP research in these disciplines.

[Please insert Figure 3 about here]

To further elaborate on the co-citation analysis, a qualitative analysis was conducted, running into depth about *how* the IMP research is used and acknowledged among those citing it, focusing the analysis on the three most-cited articles in each cluster (see Table 6). As Table 6 reveals, it is basically two clusters, the green IMP cluster and the blue international business one, that build on the IMP perspective, while the remaining clusters only mention either (or more) of the core articles in passing (please see Ritter and Gemünden, 2003, two scholars regarded as core IMP researchers and thus well-informed about and building on IMP and its

scientific underpinning, but part of the purple as an exception to this). The international business research has a commonality with IMP in terms of history and core researchers (cf. Gebert-Persson et al., 2015; Möller & Halinen, 2018), while our cluster analysis reveals how it has actually developed into a separate domain of research with a different set of references to the (green) IMP cluster.

[Please insert Table 6 about here]

While it is thus only two clusters (the green IMP and blue international business clusters) that seem to build on the IMP perspective or understand it in depth, those remaining articles only surface the perspective (see Table 6), often combining IMP with other schools of thought or linking it to central concepts such as networks or business relationships, but without really acknowledging the ontology of IMP, linked to the “worldview” on how everything is connected, interdependent, and therefore not possible to control. Interesting here is the dominance of references to the two *Journal of Marketing* IMP articles (Anderson et al., 1994; Hallén et al., 1991), pointing to how articles in highly prestigious journals may allow for a broader spread than publications in more narrowly defined journals. Beyond *Journal of Marketing*'s status as a top prestigious journal, there may be some other possible explanations as to why the Anderson et al. (1994) and Hallén et al. (1991) articles are the most-cited ones out of the core articles. Hallén et al. (1991) draw heavily on social exchange theory and the resource-dependence model. In the empirical analysis, structural equation modelling is used. While structural equation modelling would not represent a core IMP method, it may have helped to bridge disciplinary boundaries. The article by Anderson et al. (1994) is co-authored between well-established channel and IMP researchers, where the combination of authors may have enhanced the visibility of the article, again indicating that when IMP research (and researchers) reach out beyond constituents actually defining the usual practices and boundaries in terms of methods, journals and collaborations, the potential influence would be greater. But, while citations in *Journal of Marketing* could be an indication of an acceptance of the IMP perspective in prestigious research beyond B2B marketing, it is, as pointed out in Table 6, not a matter of deep impact or an in-depth understanding of the IMP school of thought (see, for instance, *Journal of Marketing* articles citing these two *Journal of Marketing* IMP articles).

With that said, Table 6 indicates how some articles indeed build on the IMP perspective, and to see the further spread of the IMP perspective related to these, we performed a second-wave

analysis, as seen in Table 7, focusing on those articles from Table 6 that went further than just surfacing the IMP research. As this analysis reveals, it is only in the articles that are part of the same areas as those indicating a deeper understanding for the IMP perspective in the first wave of direct citations of the core, that base their research on the IMP perspective. Again, neither the first nor the second wave reach beyond IMP and international business research in that regard.

[Please insert Table 7 here]

4.3 Summarizing findings – Developing propositions

The qualitative analyses show that research beyond IMP has acknowledged IMP core articles, but not continued to extensively interact with the IMP literature through feeding back ideas, through a continuous debate between disciplines, or through building on the scientific underpinning of IMP. The two exceptions are the continuous developments within IMP and the closely related international business domain, with overlapping scholars and roots, which leads to a first proposition:

***Proposition 1:** For research ideas to be understood in depth, there needs to be overlaps among researchers and ongoing debates related not only to empirical insights but also to ontological fundamentals.*

In terms of what articles are cited, our analysis of the IMP core reveals how those published in *Journal of Marketing* (a 4-star ABS-list journal) have a further reach than those published in other journals. This applies to how these articles are cited more broadly beyond the IMP and international business domains, as seen in Table 6, and are so in articles that, in turn, have high citation rates and are published in top-ranked journals. Hence, ideas suggest to travel with more width if published in highly recognized journals, and despite such journals often including articles with very different ontologies to IMP. This observation, though, is linked to only two articles (Anderson et al., 1994, Hallén et al., 1991), and there may also be other explanations to their high recognition: the method used which in Hallén et al. (1991) expands beyond the case study-dominance of IMP research and interlinks with method practices in other disciplines, and the inclusion of a highly esteemed scholar from outside IMP as a co-author in the Anderson et al. (1994) article. While *Industrial Marketing Management* and *Journal of Business Research* are held as leading journals in B2B marketing, their more narrow scope generally leads to fewer

citations and also to less of a broad recognition of ideas. While it can be hazardous to rank different journals in relation to each other, the publication in journals with broader scopes, co-productions with scholars belonging to other disciplines, and the practice of methods employed by scholars beyond a more narrowly defined discipline, would help to reach out more broadly. This leads to a second proposition, related to the travel of ideas:

***Proposition 2:** For ideas to travel broadly, they would need to be accompanied by interdisciplinary elements such as highly esteemed researchers, practices and journals beyond the particular discipline at hand.*

There are hence articles in highly ranked (and indeed highly esteemed) journals, with scholars well recognized beyond IMP and with methods employed linking to other research traditions that practice the IMP worldview and thereby state as core in the IMP domain. However, the analyses reveal that the citing work deploys a very brief and fragmented way of citing these articles, and this is a bit symptomatic. For example, the most-cited article among those citing the core is Jarvis, MacKenzie, & Podsakoff (2003) in *Journal of Consumer Research*, which uses only one reference from the IMP (Hallén et al., 1991), and this is not a central reference in Jarvis et al. (2003), and only mentioned in a table on constructs. Tables 6 and 7 give further illustrations of how articles outside of the IMP and international business areas do not go into depth about the IMP perspective. Hence, it is seldom a question of leaving deep IMP imprints on adjacent research disciplines. In terms of how ideas travel (cf. Czarniwska & Joerges, 1996), the quantitative analyses, and as depicted in Proposition 2, suggest a quite broad acknowledgment of IMP. However, as the qualitative analyses reveal: it is mostly an acknowledgement of IMP and its empirical constituents (networks, relationships), but with researchers remaining external to its ontology (cf. Haveman, 1993). This again means that the IMP research becomes one of several ideas co-existing with other ideas (cf. Sahlin & Wedlin, 2008), while not being extensively imitated (cf. Engwall, 2003) by others, nor extensively scrutinized in being different to other schools of thought. What is more, the IMP research, while referenced, may well be translated in terms of concepts so as to fit with these other disciplines. The description of alliances as an expression (yet with other definitions) of networks and similarly the ecosystem idea as an emerging concept are examples thereof. Hence, there is a matter of simultaneous transformation and translation of ideas (cf. Sahlin & Wedlin, 2008; Suárez & Bromley, 2016). This leads to a third proposition:

Proposition 3: When ideas travel broadly rather than deeply as negotiated and debated thoughts, they are only surfaced at a rudimentary, often only empirical level and indicate conflicting ontological pre-understandings, while not acknowledging such differences. Confusion of concepts means that their meaning is either transformed or that ideas resembling IMP's concepts are translated to align to each discipline's own terminology. This hinders a further spread of the IMP perspective, as it is in subsequent articles referenced related to translated concepts.

5. Conclusions

This paper set out to investigate the contribution of IMP research to broader research disciplines. It does so by analyzing how researchers within and beyond IMP have cited core IMP research. IMP scholars have during more than forty years produced numerous articles, books, book chapters and conference papers, including some highly cited works in well-reputed journals. The IMP perspective covers several aspects of business relationships, explores and explains the role of the business network, and provides analytical models, such as the ARA model. Its scientific underpinning stresses complexities and interdependencies, thus specifying core constructs of networks, embeddedness and long-term relationships through giving them specific features well recognized within the IMP Group (and in the related international business domain).

As our propositions indicate, the IMP perspective has been recognized in other disciplines, dominated by included and neighboring ones such as marketing and management, but has mainly been very rudimentarily acknowledged, not running into depth in terms of sharing or even grasping scientific underpinnings. Thereby, and as a summarizing acknowledgement, it is most often a question of a weak IMP diaspora and not a well-adopted school of thought, making weak ties a relevant description of the relationship between the adjacent disciplines and the core of IMP. It is only in those cases where there is a mutual interaction or ongoing debate between IMP and the other discipline (represented by the within-IMP development and the neighboring international business domain acknowledged as the Uppsala school of internationalization) that ideas are more deeply acknowledged and understood. Beyond these, ideas are either translated into languages of the citing disciplines, modified in their scientific interpretations beyond what could be regarded as an IMP idea, or only acknowledged without running into depth on core ideas, and without acknowledging differences in ontologies. Ideas could hence be seen as

translated, transformed (e.g., Czarniawaks & Joerges, 1996; Sahlin & Wedlin, 2008), but mostly only *surfaced*, also meaning that they are not confronted or developed in interaction with other research disciplines. Practicing the idea of limitless networks and interdependencies, the “behavior” of the diffusion of ideas rather indicates borders and single dependencies, with IMP taking ideas from other disciplines but not managing to influence a mutual development of ideas.

Hence, and while IMP could be considered as broadly acknowledged and referenced, its ideas do not really travel deeply. With that said, IMP articles in *Journal of Marketing* and other highly rated journals such as *Industrial Marketing Management* and *Journal of Business Research* indicate an acknowledgement of IMP in the B2B marketing domain, but also in journals representing an often contradictory ontology. Here though, it is mainly IMP researchers that produce this spread through being published in journals beyond the particular domain, rather than researchers beyond IMP imitating it and thereby signaling their belonging to the IMP ontology (cf. Engwall, 2003).

5.1 Theoretical implications

The intellectual core of a school of thought (cf. Sheth et al., 1988), when recognized outside the discipline (through, e.g., scholarly references), is an acknowledgement of the former’s influence in contributing to the development of the broader body of scientific knowledge. Scholars frequently evidence knowledge of core bodies of work from the wider literature and acknowledge them in their publications. We refer to this as grounded knowledge of discipline-specific imprints that are used in other research disciplines, and which are available from existing publications.

This paper relied on the travel of idea (Czarniawska & Joerges, 1996; Czarniawska & Sevón, 1996; Engwall, 2003; Sahlin & Wedlin, 2008; Suárez & Bromley, 2016) as a description to understand how ideas develop and spread. In its analysis, it comes forth that ideas are transformed and translated in different ways to fit with those various disciplines acknowledging the IMP research, yet that the ideas are only surfaced rather than used to signal a belonging or recognition of the IMP ontology. This is done through using discipline-specific concepts or through giving concepts from the IMP research new meaning in the sense that they become ontologically different. We thus refer to ideas as being translated, transformed, but only surfaced. The travel of the IMP perspective is mostly expressed as how citing work simply refer

to its concepts without recognizing the scientific ideas underpinning them, as seen in literature describing networks, relationships, trust, and similar, but combining IMP references with other schools of thought and mostly presenting them as overviews to build upon or to contrast new ideas with. Through not acknowledging the scientific underpinning of the IMP research, the IMP research is not confronted in the research debate, also meaning that its ideas are not challenged by the citing disciplines (cf. Sahlin & Wedlin, 2008). Again, this could be partially explained through how knowledge is developed within the domain and more rarely debated with other disciplines, evidenced through most articles being published in discipline-specific journals and influences only happening when scholars and roots are shared (such as with the Uppsala School of internationalization).

Again, the spread of IMP indicates a constrained travelling of ideas, having less to do with “successful” (Engwall, 2003; Haveman, 1993) ideas being imitated and more to do with how researchers feel obligated, in line with a good research tradition, to acknowledge the work of others when developing their own ideas in intra-disciplinary settings. Furthermore, it points to a difference in how the travel of ideas functions in business life, where the importance of showing belongings to own disciplines, scientific underpinnings, and concepts are prevalent when dealing with the travel of research ideas, while such reliance also means that ideas are not developed in patterns of challenging perspectives. The paper suggests how research needs to be confronted in an interactive manner with other ideas to travel more deeply, or otherwise risks being reinterpreted beyond actual meaning if at all acknowledged.

5.2 Practical implications for research

While dealing with research and its diffusion pattern, this paper has some important implications for practice, not the least since IMP and other perspectives aim to portray and contribute to business life. Linked to the consultancy world taking on research as a source of advice, the confusion among disciplines in ways that ideas are handled and carried forth creates confusion that needs to be dealt with when practicing ideas. The fragmentation of ideas underlined by how various disciplines develop their own concepts may be harmful for actually taking further steps in their developments, which suggests that practitioners, as well as researchers, should actively interact with different disciplines to enhance ideas and understand overlaps as well as divergences and incompatible underpinnings. Stressing the research practice of IMP in particular, the interaction with other disciplines could suggest being a key method to create a better diffusion of ideas than currently is the case. This would include interdisciplinary

research, spreading the IMP perspective at conferences in other disciplines, and other collaborative efforts.

5.3 Limitations and ideas for further research

Through the analysis of an extensive number of articles referring to IMP research, this paper makes an important contribution to understanding the development and influence of IMP research, and to how research ideas may spread within and among disciplines. Yet, the research conducted for this paper has some limitations that may also inspire further research. Focusing our analyses on citation patterns in recognized research outlets, we failed to include books and book chapters that would foremost have been thought to appear as references within the IMP cluster (see Figure 3), as they today have a decreasing number of citations, not the least based on how they are not part of research databases. Further research could, for instance, depart from a single publication, such as Johanson (1966) or one or more of the early books (Hägg & Johanson, 1982; Håkansson, 1982; Hammarkvist et al., 1982) to see the spread over time.

In the present paper, we focused our attention on journals, keywords and articles and practiced co-citation analysis as a method for cluster findings. Co-citation analyses have their flaws (cf. Hicks, 1987), not the least based on how they give any co-cited reference an equal value, rather than seeing which references an article actually builds on. We have partially considered this through the exclusion of method references in our core and the inclusion of the qualitative analyses. Further research could adopt other analysis methods or depart from, for instance, co-authorships (cf. Naudé, Henneberg, Zolkiewski, & Zhu, 2009) or tree structures of developments. In this current paper, the time dimension linked to the travel of ideas is not well developed and could be better explored in further research.

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Table 1: Review articles

Reference	Purpose	Data used	Research design	Findings
Johnston, W. J., & Lewin, J. E. (1997)	Introduction to JBIM publications 1987-1997	Review of 10 years of publications in JBIM, including 27 of the more unique articles.	N/A	40% of articles written by practitioners, 60% from academia.
LaPlaca, P. J. (1997)	Discusses and emphasizes a selection of exceptional articles from IMM's first twenty-four years of publication.	915 articles published over a twenty-four-year period in Industrial Marketing Management.	N/A	The evolution of the key themes and the most influential authors in B2B marketing around the contributions made to this field by Industrial Marketing Management. The contributions are arranged and discussed in terms of different subject areas in IMP.
Wilkinson, I. (2001)	The study of interfirm relations and networks in marketing channels and business markets. Traces its historical development in the twentieth century.	N/A	N/A	Historical exposé of how research traditions related to interfirm relations and networks in marketing channels and business markets have emerged in the US, Europe, Australia and Asia
Morlacchi, P., Wilkinson, I., & Young, L. (2005)	Uses social network analysis (SNA) to analyse research collaborations among members of the IMP Group during 1984-1999. The nature and structure of the IMP Group are analysed.	People presenting a joint paper at IMP annual conferences from 1984-1999 from the conference proceedings. From a total of 1,163 papers, 670 were by two or more authors. 989 authors were involved in these 670 joint papers.	A case study using SNA of the IMP Group based on the pattern of co-authorship at IMP conferences is used. Co-authorship as collaboration in writing papers to define researcher relationships. The unit of analysis is the co-authored article.	A core of 57 researchers is identified, and its evolution and network properties are described. There is national and institutional cooperation, and there is an informal collaboration network connecting different subgroups located globally. The IMP Group is a "complex adaptive system."
Backhaus, K., Mell, B., & Sabel, T. (2007)	Overview of textbooks available on business marketing problems in English, Chinese, Italian, Hungarian and German languages.	Business marketing textbooks written in English (n = 16), and textbooks written in languages other than English (n = 23). Include e-learning and multimedia, textbooks.	Only business marketing books for students published from 1995 to assure "up-to-datedness". Comparative analysis of the different approaches in English business marketing books and of structural attributes.	Various type of comparisons between educational books.
Dant, R. P., & Lapuka, I. I. (2008)	Commentary presenting some additional postscript tables associated with the content of the 14-year publishing history of JBBM to accompany the article by Lichtenthal, Mummalaneni, and Wilson (2008).	JBBM articles published in two five-year periods (i.e., 1993–1997 and 1998–2002) and for years 2003–2006.	Malhotra et al. (2005) method of creating adjusted publications.	The counts are too small for any inferential statistics. Three trends found are (1) buyer–seller relationships, (2) customer relationships, and (3) technology. These upsurges are consistent with the general contemporary trends in research in marketing.
LaPlaca, P. J. (2008)	Commentary on "The Essence of Business Marketing..." by Lichtenthal, Mummalaneni, and Wilson (2008). Attempt to show that the IMP discussion is wider and deeper than Lichtenthal et al. (2008) in JBBM presented.	Number of issues B2B and B2B articles in B2B journals: IMP, ABM&P, JBBM, JBIM, IMM, IM&P.	Quantitative study and conceptual discussion	Major B2B research areas, 1971–2006. Number of articles published 1971–2006 by major topical area. Table of relative topical coverage of B2B marketing topics 1972–2006.
Lichtenthal, J. D., Mummalaneni, V., & Wilson, D. T. (2008)	Provides an overview of the history of the JBBM in the context of similar efforts by other leading journals. The dynamics of editorial posture are subsequently examined with an eye toward how JBBM policy and procedures are formulated and implemented.	JBBM articles published. Editorial letters in JBBM.	Content features of JBBM literature.	Thoughts regarding the future content and context of the JBBM are presented.
LaPlaca, P. J., & Katrichis, J. M. (2009)	Discusses that industrial and business-to-business marketing have been underrepresented in the mainstream marketing literature, where the authors evaluate 31 marketing journals (24 mainstream marketing journals and 7 marketing journals specialized in B2B) in order to determine the extent of this underrepresentation.	31 marketing journals beginning with the initial publication of the Journal of Marketing in 1936.	N/A	In the 71-year span from a total of 17,853 articles, 6.7% dealt specifically with B2B marketing. 7 specialized marketing journals focusing on IM have published 2,580 articles, of which 98.5% focused on various marketing topics in IM and B2B.
Backhaus, K., Lügger, K., & Koch, M. (2011)	Key players, key papers, and topics in B2B marketing.	The reference lists of B2B articles from general marketing and of all articles from the three leading B2B journals (IMM, JBIM, and JBBM) were obtained from the Social Science Citation Index or collected manually for four multi-year periods.	Citation and co-citation analysis similar to McCain's (1990), reference lists of B2B articles from IMM, JBIM, and JBBM; a citation analysis of these data revealed the publications; co-citations across the 300 most-cited authors an author × author similarity matrix, which was the basis for further multivariate and SNA.	A highly dynamic discipline in the 1970s and 1980s, when new knowledge was intensively exchanged among an increasing number of B2B researchers. Co-citation network 1972–1978; co-citation network 1987–1991; co-citation network 1998–2000.
Hadjikhani, A., & LaPlaca, P. J. (2013)	The development within the B2B marketing field, from economic theory to behavioural sciences and the recently wider progression of B2B marketing theory towards other marketing fields, such as service marketing and e-business.	N/A	N/A	Map long-term development of B2B marketing theory from the early 1900s to present by highlighting the change from studies founded in economics to those built on the behavioural sciences.
Möller, K. (2013)	Examines the role of relationship marketing and business network perspectives in advancing business-marketing theory.	A dozen review articles.	Extensive meta-theoretical review	RM and BN are constructed by relatively broad and fragmented research traditions that cannot be combined because of their unique content and divergent ontological and epistemological premises. RM-BN contingency view for the further development of business marketing theory.
Mummalaneni, V., & Lichtenthal, J. D. (2015)	21 years of publication in JBBM and its contributions to the field of B2B marketing.	Research articles in JBBM.	Quantitative and qualitative analyses to evaluate 21 years of JBBM articles. Narrative describing the origins of the journal and the change of publisher, the output of the journal, authorship patterns and the affiliations of the authors, content of the articles, special issue foci, and citation patterns are examined.	Indicates maturity and stability of the journal. Co-authorship is dominant and authors from 30 countries, 250 different universities. B2B relationships is dominant research theme, while a multitude of research frameworks and approaches are also examined across the years in the JBBM.
Vieira, F., & Brito, C. (2015)	Map scientific knowledge in industrial marketing.	SCOPUS 14,000 records from 1956 to 2009. Chronological evolution.	Quantitative and descriptive research using scientometric analysis based on scientific records. The sample fits Bradford's and Lotka's power laws of distribution of science in use.	4 stages: the genesis of this stream of research 1956-1984, the early development 1985-1995, the consolidation of production 1996-2003, scientific maturity 2004-. A clear predominance of single authorship. Management Science and IMM journals are the most-cited sources.
Young, L., Wilkinson, I., & Smith, A. (2015)	Identifies underlying concepts contained in the articles published in the Journal of Business-to-Business Marketing (JBBM) from 1993 to 2014 and how these have changed over time.	206 competitive and invited papers published in 20 JBBM volumes.	Text and content analysis is used to identify the main concepts embedded in the texts, i.e. their frequency and patterns of co-occurrence.	4 conceptual themes were identified: relationships, market, study and business. Early articles had a narrow focus on distribution, power and conflict. The attention changed to include firm business marketing strategy

Engwall, L., Pahlberg, C., & Persson, O. (2016)	Tracing the background and development of research on business networks in general, and the IMP approach in particular	533 articles generated through searching "business networks"	Co-citations among papers referring to "business networks"	and pedagogy, networks, the Internet and collaborative relations. Most recent articles include psycho-social networks, trust and commitment. IMP has early predecessors in other areas. The approach is not covered in journals before the 1990s. Internationalization and industrial marketing research in Uppsala has been important for the development.
Möller, K. & Halinen, A. (2018).	Investigates the IMP research community in the creation of B2B marketing theory from the early 1990s to the present.	Books and IMM special issues by IMP: most-cited IMP articles in other journals. Editorials in IMM journal.	Analysis of IMP-IMM relation and evolution from the academic ecosystem perspective. Extant bibliometric and SNA analysis. Co-citation analysis and systematic search of co-authors publications.	A narrative about the relationship between IMM and IMP is illustrated in terms of investigating academic value creation in the B2B domain. Parties created new academic knowledge and value for each other through intensive interaction and collaborative activities.

Table 2: Steps of research design.

No.	Step	Description	Number of items
<i>1</i>	<i>Defining the IMP core</i>		
1a	Searching central IMP articles	Selecting articles with > 100 citations. Verification through Scopus	34 articles meeting criteria (see Table 3 for details)
1b	Verifying the core	Comparing initial search with Halinen & Möller's (2018) list of the most central IMP scholars' top-cited articles. Qualitative evaluation of articles to ensure a stable core	11 combined articles
1c	Finalizing the IMP core	Excluding method articles	9 articles as the core
<i>2</i>	<i>Citation analyses to analyze width of spread</i>		
2a	Discipline analysis of articles citing the core (direct citations, 1 st wave)	Analysis of Web of Science categorized disciplines in the articles	Record count of discipline categories from 2,532 articles
2b	Journal analysis	Journals where the core and its direct citing articles are published	2,532 articles clustered based on journals and journals analyzed based on co-citation
2c	Keyword analysis	Analysis of author-supplied keywords in the articles (core and direct citing articles)	4,870 keywords clustered based on co-citation
2d	Article co-citation analysis	Clustering of articles citing IMP core to defect disciplines and other sub-groups	2,532 articles into 10 defined clusters
<i>3</i>	<i>Qualitative analyses to judge depth of spread</i>		
3a	Analysis of how IMP perspectives acknowledged in citing research	Review of 3 highest cited articles for each defined cluster in 2d.	30 articles reviewed
3b	Analysis of the 2 nd wave of citing research	Review of high-cited articles (2 nd wave) citing those building on the IMP perspective as concluded in Table 6. Three articles per 1 st wave article.	15 articles reviewed

Table 3: Initial searches to establish the raw list of IMP core articles.

No.	Search strategy	Hits
1	Keywords: [IMP or “industrial network*” or “business-to-business interaction*”]	227
2	Scholars: 43 top IMP scholars, including founders, past and present IMP board members, SIG members, and the IMP journal editorial board, and recurring visitors to IMP events	626
3	Conferences: All articles from special issues based on the IMP conferences	198
4	Combination of #1-3 after duplicates were removed	910
5	Selecting articles with >100 citations each.	34

Source of search: *ISI Web of Science*

Table 4: The core articles of the IMP perspective.

Rank	Author(s)	Title	Journal	Year	Vol.(Issue)	Citations*
1	Andersson, J. C., Håkansson, H. & Johanson, J.	Dyadic business relationships within a business network context	<i>Journal of Marketing</i>	1994	58(4)	803
2	Håkansson, H. & Ford, D.	How should companies interact in business networks?	<i>Journal of Business Research</i>	2002	55(2)	561
3	Hallén, L., Johanson, J., & Seyed-Mohamed, N.	Interfirm adaptation in business relationships	<i>Journal of Marketing</i>	1991	55(2)	421
4	Ford, D.	The development of buyer-seller relationships in industrial markets	<i>European Journal of Marketing</i>	1980	14(5/6)	372
5	Ritter, T. & Gemunden, H. G.	Network competence: Its impact on innovation success and its antecedents	<i>Journal of Business Research</i>	2003	56(9)	306
6	Ritter, T., Wilkinson, I. F. & Johnston, W. J.	Managing in complex business networks	<i>Industrial Marketing Management</i>	2004	33(3)	278
7	Möller, K. & Halinen, A.	Business relationships and networks: Managerial challenge of network era	<i>Industrial Marketing Management</i>	1999	28(5)	227
8	Wilkinson, I. F. & Young, L.	On cooperating: Firms, relations and networks	<i>Journal of Business Research</i>	2002	55(2)	185
9	Gadde, L-E. & Snehota, I.	Making the most of supplier relationships	<i>Industrial Marketing Management</i>	2000	29(4)	182

* Number of citations retrieved from *ISI Web of Science*, November 10, 2018.

Table 5: Disciplines referring to the IMP core.

Discipline (<i>WoS</i> categories)	Record count*
Business	1,635
Management	1,287
Operations Research, Management Science	146
Engineering Industrial	133
Economics	93
Engineering Manufacturing	68
Computer Science Information Systems	61
Information Science Library Science	51
Environmental Studies	31
Hospitality Leisure Sport Tourism	30
Engineering Electrical Electronic	29
Social Sciences Interdisciplinary	28
Business, Finance	27
Computer Science Artificial Intelligence	27
Computer Science Interdisciplinary Applications	26
Computer Science Theory Method	26
Food Science Technology	21
Regional Urban Planning	21
Environmental Sciences	19
Green Sustainable Science Technology	19
Engineering Multidisciplinary	17
Development Studies	17
Sociology	14
Psychology Applied	14
Agricultural Economics Policy	13

*Extracted from *ISI Web of Science*, March 30, 2019. Any article may be included in more than one category, which is why the table summarizes to more than the analyzed article amount.

Table 6: Review of the three highest cited articles referring to the IMP core in each cluster.

Cluster	Article	Citations*	Journal	Core articles cited and times cited	Usage of core articles
Orange	Jarvis, C. B., MacKenzie, S. B. & Podsakoff, P. M. (2003)	2,036	<i>Journal of Consumer Research</i>	Hallén, L., Johanson, J., & Seyed-Mohamed, N. (1991), cited 1 time	Mentioned in a table that is based on a literature review as an example of articles that uses first-order or second-order constructs with formative indicators.
Orange	Chen, I. J., & Paulraj, A. (2004)	817	<i>Journal of Operations Management</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time	Mentioned in relation to part of a figure
Orange	Rai, A., Patnayakuni, R., & Seth, N. (2006)	612	<i>MIS Quarterly</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time	Mentioned in one passage discussing bonds between customers and suppliers.
Blue	Johanson, J., & Vahlne, J. E. (2009)	1,260	<i>Journal of International Business Studies</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time Hallén, L., Johanson, J., & Seyed-Mohamed, N. (1991), cited 1 time	Anderson, Håkansson, and Johanson (1994) is used in the theory section to describe that firms operate in networks of connected business relationships. Hallén, Johanson, and Seyed-Mohammed (1991) is used in the theory section to describe that as relationships develop, strong ties and interdependencies develop and ultimately increased joint productivity.
Blue	Anderson, J. C., Håkansson, H., & Johanson, J. (1994)	829	<i>Journal of Marketing</i>	Hallén, L., Johanson, J., & Seyed-Mohamed, N. (1991), cited 1 time	Mentioned as one of many studies in an introduction about relationships between firms in business networks.
Blue	Coviello, N. E. (2006)	417	<i>Journal of International Business Studies</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 5 times	Used in discussions regarding network boundaries and horizons.
Red	Crosby, L. A., Evans, K. R., & Cowles, D. (1990)	1,620	<i>Journal of Marketing</i>	Ford, D. (1980), cited 1 time	Mentioned in one passage describing relationship development as a process that is typically complex and subject to a variety of simultaneous influences.
Red	Das, T. K., & Teng, B. S. (1998).	1,326	<i>Academy of Management Review</i>	Hallén, L., Johanson, J., & Seyed-Mohamed, N. (1991), cited 1 time	Mentioned in one passage discussing interfirm adaptation.
Red	Cannon, J. P. & Perreault Jr, W. D. (1999)	808	<i>Journal of Marketing Research</i>	Hallén, L., Johanson, J., & Seyed-Mohamed, N. (1991), cited 5 times	Used four times in the theoretical discussion together with other IMP-related references (not part of our core). Also used one time in the discussion part of the article.
Green	Provan, K. G., & Kenis, P. (2008)	912	<i>Journal of Public Administration Research and Theory</i>	Håkansson, H., & Ford, D. (2002), 1 time cited	Mentioned in one passage discussing network-level tensions as a result of participating in a network.
Green	Håkansson, H., & Ford, D. (2002)	587	<i>Journal of Business Research</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time	Used as one of many references to describe the first network paradox.
Green	Grandori, A. & Soda, G. (1995)	415	<i>Organization Studies</i>	Ford, D. (1980), cited 1 time	Mentioned in one passage describing a stream of industrial marketing contributions discussing long-term exchange relationships of industrial goods.
Light green	Ulaga, W. & Eggert, A. (2006)	427	<i>Journal of Marketing</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time	Mentioned in one passage describing buyer-seller relationships as embedded in complex networks of relationships.
Light green	Storbacka, K., Strandvik, T., Grönroos, C. (1994)	425	<i>International Journal of Service Industry Management</i>	Ford, D. (1980), cited 1 time	Mentioned in one passage describing contributions of interaction and network approach.
Light green	Cannon, J. P. & Homburg, C. (2001)	349	<i>Journal of Marketing</i>	Hallén, L., Johanson, J., & Seyed-Mohamed, N. (1991), cited 1 time	Mentioned in one passage discussing relationship-specific adaptations.
Purple	Pittaway, L., Robertson, M., Munir, K., Denyer, D. & Neely, A. (2004)	542	<i>International Journal of Management Reviews</i>	Ritter, T. & Gemünden, H. G. (2003), cited 7 times	Used as one recurrent reference in a systematic review of research linking the networking behaviour of firms with their innovative capacity.
Purple	Walter, A., Auer, M. & Ritter, T. (2006)	371	<i>Journal of Business Venturing</i>	Ritter, T. & Gemünden, H. G. (2003), cited 1 time	Mentioned in one passage discussing that network competence is a firm's ability to develop and use inter-firm relationships.
Purple	Ritter, T. & Gemünden, H. G. (2003)	324	<i>Journal of Business Research</i>	Håkansson, H., & Johanson, J. (1994), cited 3 times Ford, D. (1980), cited 1 time Möller, K. K., & Halinen, A. (1999), cited 1 time	The references are used to introduce thoughts of business relationships and networks as connected and embedded.
Brown	Lee, J-N. (2001)	359	<i>Information and Management</i>	Hallén, L., Johanson, J., & Seyed-Mohamed, N. (1991), cited 1 time	Used as a general reference to refer to research on business relationships in marketing.
Brown	Marasco, A. (2008)	182	<i>International Journal of Production Economics</i>	Håkansson, H., & Johanson, J. (1994), cited 1 time; Ford, D. (1980), cited 2 times	The references are used to introduce thoughts of business relationships and networks as connected and embedded. Use also partly other IMP related references to create an analytical framework.
Brown	Kern, T. & Willcocks, L. (2000)	154	<i>Journal of Strategic Information System</i>	Ford, D. (1980), cited 2 times	Mentioned in one passage discussing that business relationships become institutionalised over time.
Pink	Geyskens, I., Steenkamp, J-B & Kumar, N. (1998)	378	<i>International Journal of Research in Marketing</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time	Mentioned in one passage discussing future research about trust and network identities.
Pink	Gounaris, S. (2005).	233	<i>Journal of Business Research</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time	Mentioned in one passage discussing decision structures of business relationships.
Pink	Morgan, R.M. & Hunt, S.D. (1994)	152	<i>Journal of Business Research</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time	Mentioned in one passage discussing attractiveness in networks.
Light red	Simonin, B. I. & Ruth, J. A. (1998)	463	<i>Journal of Marketing Research</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time	Used as a general reference to refer to research on business relationships.
Light red	Heide, J. B. & Weiss, A. M. (1995).	263	<i>Journal of Marketing</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time	Mentioned in one passage discussing costs of maintaining multiple business relationships.
Light red	Michaelidou, N., Siamagka, N. T. & Christodoulides, G. (2011)	195	<i>Industrial Marketing Management</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time	Mentioned in one passage discussing that exchange exists between two or more business relationships.
Light blue	Knudsen, M. P. (2007)	189	<i>Journal of Production Innovation Management</i>	Gadde, L-E. & Snehota, I. (2000), cited 1 time	Used as a general reference to refer to research on business relationships.
Light blue	Hult, T., Hurley, R., Giunipero, L. & Nichols Jr, E. (2000)	138	<i>Decision Science</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time	Mentioned in one passage discussing learning in networks.
Light blue	Wagner, S. M. & Johnson, J. L. (2004)	128	<i>Industrial Marketing Management</i>	Anderson, J. C., Håkansson, H., & Johanson, J. (1994), cited 1 time	Used as a general reference to refer to research on business relationships.

* Number of citations retrieved from *ISI Web of Science* March 18-22, 2019.

Table 7: Review of second wave of citing research.

Article	Citations*	First wave citation	Use of IMP
Gold, Seuring & Beske (2010)	272	Marasco, 2008 (cited 1 time)	1 source mentioned in a passage about interfirm interactions
Pokharel & Mutha (2009)	202	Marasco, 2008 (cited 1 time)	No IMP sources
Wolf & Seuring (2010)	89	Marasco, 2008 (cited 1 time)	1 source mentioned in relation to case study approach
Tuli, Kohli & Bharadwaj (2007)	487	Cannon & Perreault, 1999 (cited 1 time)	1 source in a passage about focusing on relationships
Olson, Slater & Hult (2005)	373	Cannon & Perreault, 1999 (cited 1 time)	No IMP sources
Selnes & Sallis (2003)	354	Cannon & Perreault, 1999 (cited 3 times)	3 sources mentioned in relation to (i) relationship learning and (ii) interpersonal ties across company boundaries
Tung & Verbeke (2010)	219	Johanson & Vahlne, 2009 (cited 2 times)	No IMP sources
Madhok & Keyhani (2012)	156	Johanson & Vahlne, 2009 (cited 1 time)	No IMP sources
Sun, Peng, Ren & Yan (2012)	144	Johanson & Vahlne, 2009 (cited 1 time)	No IMP sources
Jones, Coviello & Tang (2011)	323	Coviello, 2006 (cited 1 time)	1 source mentioned under previous studies of entrepreneurs
Yamakawa, Peng & Deeds (2008)	305	Coviello, 2006 (cited 1 time)	No IMP sources
Welch, Piekkari, Plakoyiannaki & Paavilainen-Mäntymäki (2011)	304	Coviello, 2006 (cited 1 time)	No IMP sources
Crossan & Apaydin (2010)	580	Pittaway et al., 2004 (cited 5 times)	No IMP sources
Pittaway & Cope (2007)	394	Pittaway et al., 2004 (cited 3 times)	No IMP sources
Thorpe, Holt, Macpherson & Pittaway (2005)	236	Pittaway et al., 2004 (cited 8 times)	No IMP sources

* Number of citations retrieved from *ISI Web of Science*, April 3, 2019.

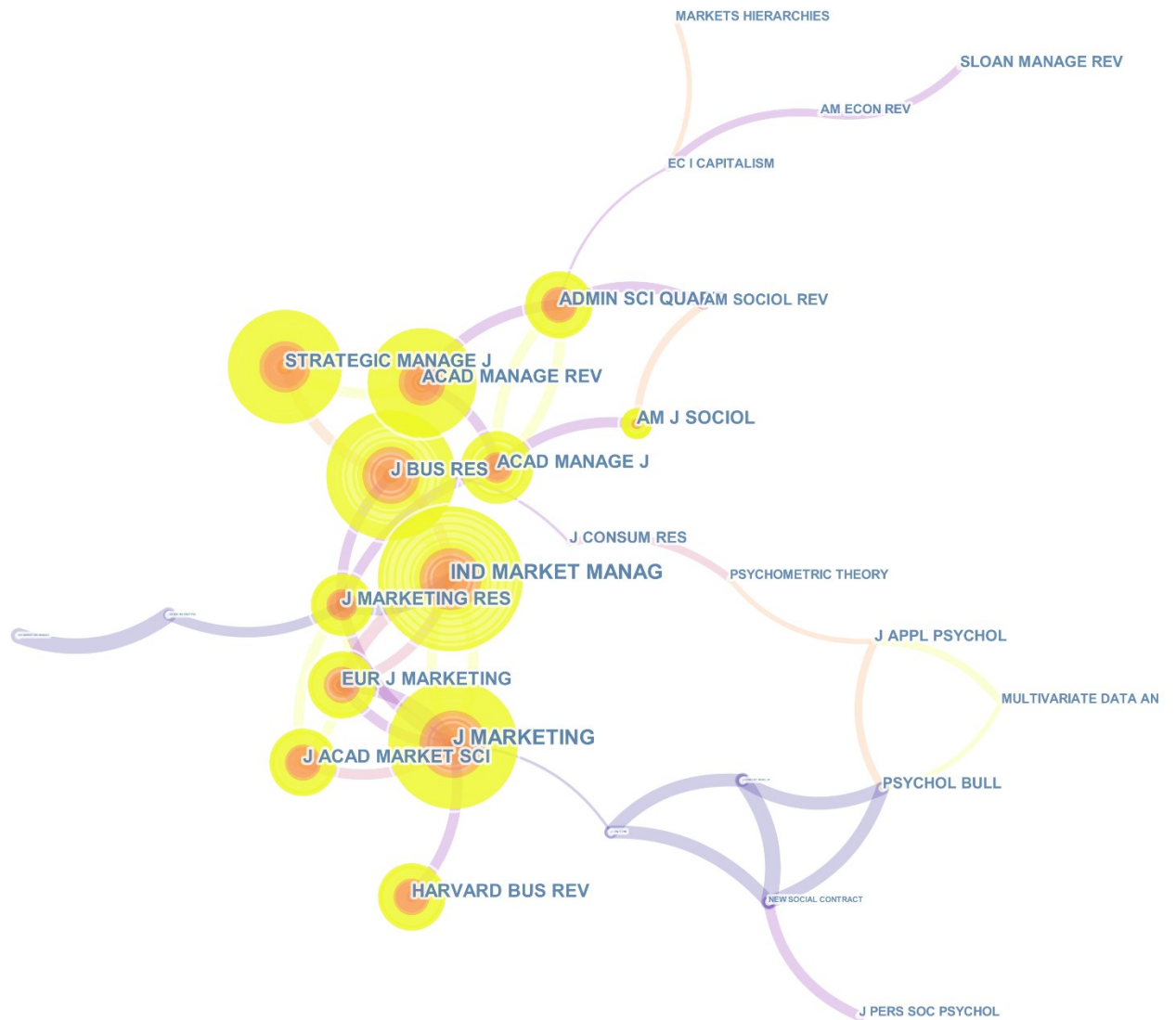


Figure 1: Journal co-citation map of those articles citing the IMP core. The circle of each journal consists of a number of color, from dark orange to yellow, with the colors representing different years, the darker the color, the older the publication, with each time slice describing an individual year.

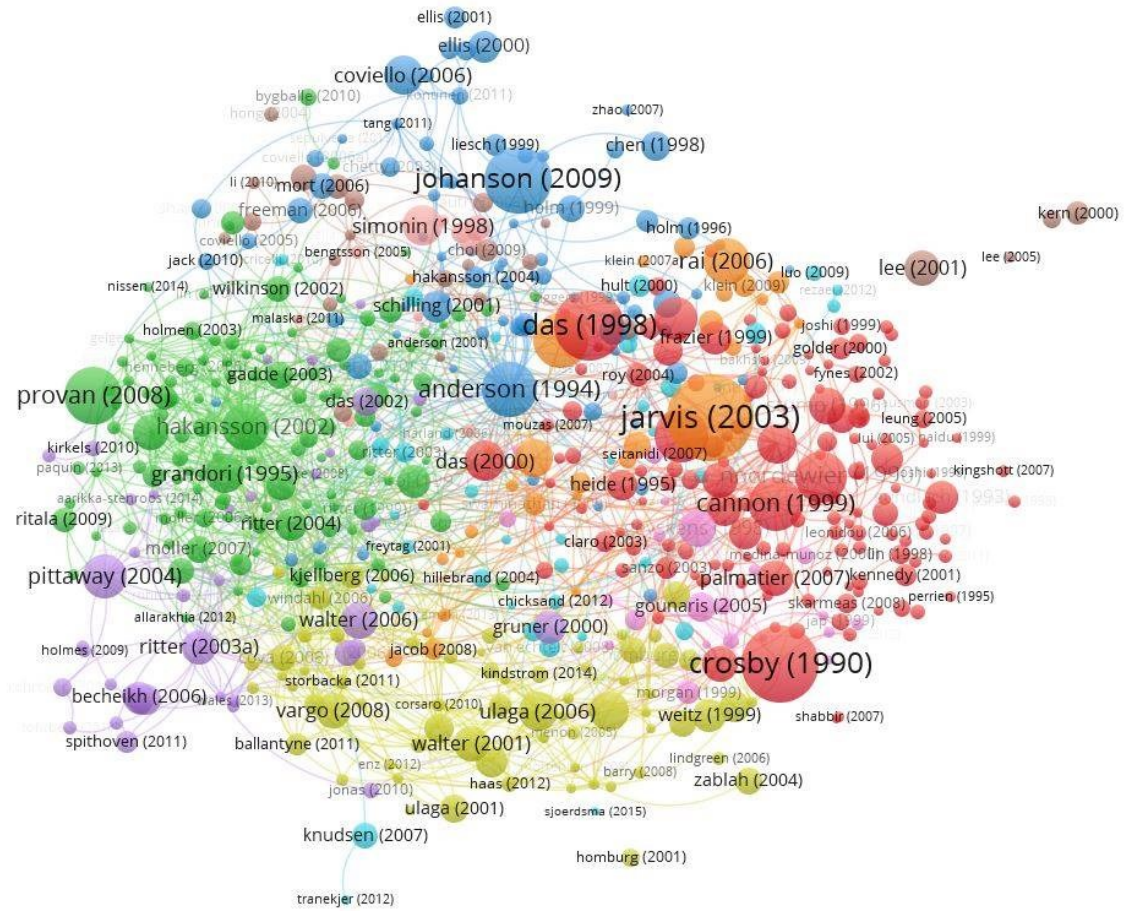


Figure 3: Clustered articles citing the core. Colors being based on articles co-citing the same articles. The larger the node describing for each article, the more citations the article has in turn. Please note that only the first author of each article is stated in the figure.