

THE DEVELOPMENT AND TRANSFER OF SCHOLARLY MARKETING THOUGHT IN TURKEY: A SCIENTOMETRIC ANALYSIS OF MASTER AND PHD THESES 1980 – 2008 IN AN EMERGING MARKET COUNTRY*

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Abstract: Marketing knowledge generated at institutions of higher education is mostly considered to be distributed via journal publications and books. The neglected part of work of scholarly marketing evaluation is theses written for an academic and practitioner audience. This study focuses on the knowledge transfer achieved via theses (masters or Ph.D.) in an emerging market country, Turkey. The research questions describe the aim of study: ‘What are the main significant topical structures of the marketing theses in terms of keyword patterns? What are the keywords patterns reflecting the linkages between main and peripheral themes? Which granular structure of theses topics are constitutive elements of the keyword patterns?’ The methodological approach chosen for the analysis is a combination of quantitative scientometric and network analytical procedures. They are based on co-occurrence of keywords of 2000 marketing theses as elaborated by YÖK Thesis Center data base.

The significant results show evidence that three different areas can be identified in the marketing keyword network. The core ‘Turkey, distribution channels, problems and marketing activities’, the semi-periphery ‘Competitiveness and Power’, and the periphery ‘Buyer preferences’ build the structure of the knowledge domain provided by theses work.

Keywords: scientometrics, marketing theses, scholarly marketing knowledge, knowledge domain.

TÜRKİYE’DE AKADEMİK PAZARLAMA DÜŞÜNCESİNİN GELİŞİMİ VE YAYIMI: YÜKSELEN BİR PAZARDA 1980 – 2008 YILLARINDA YAZILMIŞ YÜKSEK LİSANS VE DOKTORA TEZLERİNİN SCIENTOMETRİK ANALİZİ *

Özet: Yüksek öğretim kurumlarında geliştirilen pazarlama bilgisinin çoğunlukla dergiler ve kitap yayıncılığı ile kitlelere ulaştığı varsayılır. Akademik pazarlama çalışmalarının ihmal edilen bölümü ise akademisyenler ve uygulama alanındakilerin kullanımı için yazılan tezlerdir. Bu çalışma, bir yükselen pazar olan Türkiye’de yüksek lisans ve doktora tezleri yolu ile elde edilen bilginin transferine odaklanmıştır. Araştırma soruları, çalışmanın amacını da tanımlamaktadır: ‘Pazarlama tezlerinin temel konusal yapıları anahtar kelimeler göre nasıl şekillenmektedir? Anahtar kelimelerin oluşturduğu şekillenmede çekirdekteki ana konular ve çemberindeki yan konular arasında nasıl bir ilişki göstermektedir? Tez konularının hangi tanecikli yapısı anahtar kelimelerin şekillenmesindeki yapısal unsurlardır?’ Analiz için seçilen yöntem bilimsel yaklaşım, nicel scientometrik (bilimselölçev) ile network (ağ) çözümsel yöntemlerinin bir birleşimidir. YÖK Tez Merkezi veri tabanından elde edilen 2000 pazarlama tezindeki kendini tekrarlayan ve birlikte ortaya çıkan anahtar kelimelerin analizidir. Anlamlı sonuçlar üç farklı alanda anahtar kelimelerin birer ağ oluşturduğunu yansıtmaktadır. Çekirdekte ‘Türkiye, dağıtım kanalları, sorunlar ve pazarlama faaliyetleri’ yer almaktadır. İlk çemberde ‘rekabet ve güç’, ikinci çemberde ise ‘alıcıların tercihleri’ tez çalışmalarının bize sunduğu bilgi alanının yapısını ortaya koymaktadır.

Anahtar kelimeler: scientometrics (bilimselölçev), pazarlama tezleri, akademik pazarlama bilgisi, bilgi alanı.

Introduction

Evolution and generalizability of scientific approaches contribute to the societal and economic progress in a country. Three major interest groups namely academics, professionals and governors closely follow the advancement of science (Gauthier, 1998; Noyons, 1999; Rehn - Kronman, 2006). While business people and politicians are curious about future scientific

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trends and innovative approaches in order to support investments (Noyons, 1999), the academia is mainly attracted to building knowledge infrastructure to support future professionals as well as to increase their publication performance (Noyons, 1999, Leydesdorff, 2001; Rehn - Kronman, 2006). Leydesdorff (2005) in his Triple Helix model advocates that these institutional carriers form an innovation system through interactions. New ideas and knowledge are generated by organized science and technology in universities. The interactions between universities, policy makers and businesses manifest itself as policy making in the public sphere and management in the private sphere. That constitutes a knowledge-based economy which supports development and wealth. Among many other science areas that support knowledge-based economic systems, marketing with its visionary nature has also been recognized as an influential discipline on business orientations and economic trends in countries (Gibson, 1998; referring to Kotler, Porter and others). In other words, it will be appropriate to claim that marketing with its ideas, concepts, models and practices is a part of 'knowledge-based economy' (Leydesdorff, 2010). Therefore, like many scholars of marketing (e.g. Day - Montgomery, 1999; Deshpande, 1999; Hubbard et al., 2005; Hunt, 1991; Troye - Howell, 2004), it is believed that rethinking marketing and examining the trends, gaps and opportunities in this field can yield emerging issues as to create synergy among these interest groups state above and hence contribute establishing knowledge dominant economies.

Abramovitz - David (1996) suggest that codified knowledge should be analyzed in order to understand the basis for the organization and conduct economic activities. In other words, the examination of masters and PhD theses on marketing can help us to understand what Leydesdorff (2000, 2005) suggests: the building blocks of any knowledge-based economy. As academic dependency theory argues (Alatas, 2003) most of the knowledge of marketing phenomena derives almost exclusively from research conducted in high-income, industrialized countries and internalized by the academia outside the west without much critical assessment. Drawing on Leydesdorff's (2010) view on rapid change, we argue that not only advanced economies but also emerging markets are under high pressure to meet the expectations driven by new trends (viz. Altunisik - Torlak, 2006; Burgees - Steenkamp, 2006).

1. Importance of Emerging Markets and Turkey

When multinational firms of advanced economies faced low market penetration, low market share, low profitability in emerging markets; failure was often attributed to market difficulties rather than to multinationals' inability to realize that emerging markets are different. Dawar - Chattopadhyay (2002) state that due to emerging markets' structural differences the traditional "copy-and paste" marketing strategies will not work in these business settings unless they are adapted. Successful multinationals that are able to sense those options design strategies on a regional basis (Rugman - Hodgetts, 2001). It is not only necessary to understand how strategies are adapted by organizations, but also how new dimensions and paradigms for managerial knowledge are generated in universities of these countries, contributing to the field of emerging market studies. Accordingly, this study aims to investigate the level of development in marketing thought in an emerging market setting, Turkey by focusing on the masters and PhD theses as to position Turkey from a new perspective for business world.

Turkey is of relevance for such investigation for couple of reasons. Grant Thornton International Business Report (IBR)[§] of May 1, 2007 identifies besides Mexico, Indonesia and Pakistan Turkey as an emerging market to watch closely. The report identified these four markets as the next generation of emerging economies to have significant impacts on the world

[§] See for details http://www.gti.org/pressroom/articles/pr_05082007.asp , URL: May 14, 2007; <http://www.gti.org/>

economy; praising Turkey on the path to making the transition to a modern industrial economy and stating its economic and political influence in the Mediterranean, West Asian and Middle East regions. Besides providing a high level of market attractiveness to foreign investors, foreign operations and direct investments (FDIs) of Turkish companies are increasing in different regions of the world. Garten in 1996 and 1997 had also stated Turkey among Big Ten, and later Business Week included Turkey in its extended list of the BRIC countries. As one of its kind, Turkish market is worth to analyze from the marketing thought and trends perspective with its positive foreign investment climate and opportunities, well developed marketing orientation, changing structure of consumption based on new trends, values, and shopping patterns (see Bilgin et al., 2004: 110). Moreover, Turkey is in the Bologna Process since June 2004 with quality focus in higher education.

We respond to Burgess - Steenkamp's (2006) call on focusing on emerging markets for research as to enrich marketing science and practice.

2. Research Agenda

Since, professionals apply the knowledge generated and taught in universities to their own organizations and marketing related problems, we chose to study masters and PhD theses written via which theoretical basis of marketing is applied and disseminated and to examine how research characteristics and agenda of marketing discipline have evolved in the theses completed. in an emerging market context, Turkey. The data base is all marketing theses written and stored in different universities all over Turkey in a period of 29 years.

The three objectives of the bibliometric study are as follows: (1) What are the main significant topical structures of the marketing theses in terms of keyword patterns? (2) What are the keywords patterns reflecting the linkages between main and peripheral themes? (3) Which granular structure of theses topics are constitutive elements of the keyword patterns?

3. Evolution of Scholarly Marketing Thought in Turkey

In Turkey the first publications on marketing started in 1954. The first professor of marketing *Mehmet Oluc* translated the word "marketing" into Turkish (pazarlama) and worked on history of marketing, market extension, and various fields of marketing such as buyer motives and behavior, transportation and warehousing, standardization, marketing and financing functions. In 1960's tourism and agriculture marketing have become hot topics. In those years, the first books published by the Turkish academia were on marketing research, marketing strategies and sales management (Tek, 2007). In the second half of 1960's *Ahmet Koc* was the marketing professor focusing on the problems in marketing in terms of tactical and operational decisions, timing of market entry and product development (Koc - Göker, 1966).

In the 1970's, marketing education became a specific field of interest. The focus was on advertising, international marketing, distribution channels, logistics and consumer behavior. Other publications were on marketing cost analysis and pricing, product policies, marketing planning, marketing research and industrial marketing. After the liberalization of trade in 1980's, customer oriented approach have dominated the studies in Turkish marketing academia. In 1990's, the interest for big scale retailing and logistics has begun. After the millennium, the discussions on value orientation have started (Tek, 2007).

Following marketing's inclusion in higher education as one of the major subject areas, the first academic gathering on marketing started in 1975 at Istanbul University with 'Marketing Management Seminars' on different areas of marketing, covering topics such as marketing planning and research, socio-cultural perspectives of consumer behavior and models, agency relations and advertising, product policy, new product development, social responsibility of

marketing, supplier problems, sales force management, physical distribution policy, channel systems, pricing and international marketing (Tuncer, 2006).

Despite the long silence in organization of a national congress mostly due to financial problems, the last fifteen years have been very fruitful for Turkish marketing academics as to share their ideas and follow new developments in the National Marketing Congresses. When we look at the last seven years, we observe that a wide range of issues were captured by scholars. The themes of the 2003, 2004 and 2005 congresses were “conjunctures in marketing”^{**}, “marketing dynamics between Turkey and EU” and “international marketing” respectively. Mainly, the topics covered were strategic alliances, firms’ internationalization, brand value creation for export, B2C-B2B-B2G, quality, export performance and competitiveness strategies, customs union and unfair competition, international distribution. In the 2005 meeting, there has been a slight touch on e-business / e-marketing. The year 2006^{††} focus was “value creation in marketing” with value chain network planning and management, and interaction. The topic of the year 2007 was “competition, marketing and retailing”^{‡‡}, focusing on. innovativeness, change management, value creation, consumption culture, postmodern consumption, social marketing, marketing aesthetics and design for competition. Flashy concepts appearing in the titles were retailtainment^{§§}, technology retailing, word of mouth, ecosystem valued marketing, cynical marketing, experimental marketing, regulatory focus theory, and marketing engineering. In the year 2008 “sustainability and marketing” and “new perspectives in marketing” were the topics chosen for the two locations of the parallel conferences. For the former main sessions were on business ethics and green marketing and green consumption along with corporate social responsibility. For the latter main sessions were on relationship marketing, postmodern marketing, permission and experiential marketing, e-marketing, sustainable competition, ethics, and local marketing in global market environment^{***}. The conference in 2009 focused on “glocal marketing” with tracks on branding ethnocentrism, place and web marketing^{†††}. The congress in October 2010 focused on “marketing and the consumer during the knowledge and communication age”.

As it could be read from the brief presentation of sub-fields, the territory of marketing studies in Turkey has expanded very rapidly over the years. This has been highly driven by the acceleration of the number of universities and graduate theses completed (see www.yok.gov.tr). Although reflecting a very positive picture (for detailed critics see Altunışık - Torlak, 2006), it is still questioned whether the academics still borrow subjects from the West or new areas forced by the nature of an emerging market blossom in scholarly marketing in Turkey. Nevertheless, the work done in academic community in Turkey sets and reflects the framework in the marketing scientific arena, It gives orientation and may direct literature reception of students writing their theses at university institutions in the country.

^{**} 8.Ulusal Pazarlama Kongresi, <http://www.anatoliajournal.com/turizmbulteni/temmuz2002.html>, URL:25. 8. 07

^{††} The 11th National Congress in Marketing in Turkey, hosted by Dokuz Eylül University, Izmir; <http://web.deu.edu.tr/maritime/pazarlama2006.html>, URL: 25.08.07

^{‡‡} The 12th National Congress in Marketing in Turkey was hosted by Sakarya University on October 18 to 20, 2007. See for details the web site <http://www.pazarlamaturkiye.com/content/view/54/77/>.

^{§§} entertainment based retailing

^{***} The 13th National Conference on Marketing was hold in two separate locations, one organized in Adana hosted by Cukurova University, October 30-November 1(see under: <http://pazarlama2008.cu.edu.tr>), the other in Nevşehir hosted by Nevşehir University, October 25-29, 2008 (see under: <http://iibf.erciyes.edu.tr/nevpazarlama>)

^{†††} The 14th National Conference on Marketing was organized in Yozgat in October 14-17, 2009 and hosted by Bozok University (see: http://pazarlamakongresi.bozok.edu.tr/kongre_programi.htm)

4. Method of Analysis

Depicting the evolution of intellectual structures through mapping has been of interest to academics for a long-time (Rehn - Kronman, 2006). Different units of analysis such as words, terms, and documents, collection of individual authors, groups of them, specialties, and scientific communities have been subject to examination. Accordingly, several analysis approaches have occurred on the basis of the locus of assessment (Chen, 2003, Rehn - Kronman, 2006): word co-occurrences in text, document co-citation, author co-citation, or patent co-citation. Bibliometrics is an interdisciplinary science (Leydesdorff, 2001, Gauthier, 1998) in which statistical and mathematical indicators, methods and models are used to study written scientific communication or more general information, mostly collected in large databases containing scientific publications or patents (Janssens, 2007). Since in this study, we aim to work on keywords to detect marketing trends and domains by looking at a large database of masters and PhD theses, we chose bibliometrics as the most suitable method that fits with our purpose.

4.1. Institutional origin of data

The structure of the Turkish university system started in the early days of the Seljuk Turks in the 11th century in Baghdad (<http://www.yok.gov.tr/english/part1.doc>) and covered the subjects very similar as medieval universities in Europe. Periods of reorganization and innovation in Ottoman times were followed by a completely new structure in the first ten years of the Turkish Republic (Hirsch, 2005; <http://www.yok.gov.tr/english/part1.doc>). Nowadays the system consists of public and private universities, where the Council of Higher Education (YÖK) functions as a guiding state institution over their activities.

Table 1: List of Turkish Universities*

| <i>Period</i> | 1933 -1960 | 1961-1980 | 1981-1990 | 1991 -2000 | 2001 - 2009 | Total |
|---------------------|------------|-----------|-----------|------------|-------------|------------|
| <i>Universities</i> | 7 public | 12 public | 9 public | 25 public | 41 public | 94 public |
| <i>Established</i> | | | 1 private | 19 private | 25 private | 45 private |

* without military and police academies and two year private institutions.

Source: The Turkish Higher Education System Part 1- History, <http://www.yok.gov.tr/english/part1.doc>; http://www.yok.gov.tr/content/view/343/219/lang,tr_TR

Until 1980, the number of universities had increased to 12, in the period 1981 - 2009 the increase was up to 139 (table 1), among those 94 being state universities. Between the years 1923-2009, student enrolment increased from 2,914 to 1,746,534, among these 44% being female. The total of 144,950 graduate students collapses into 109,281 (75.4 %) pursuing a masters' and 35,669 (24.6 %) a Ph.D. degree categories. The proportion of female students (see <http://yogm.meb.gov.tr/devletogrenci.htm>; <http://yogm.meb.gov.tr/Vakifogrenci.htm>) in masters and PhD studies was 47.5 % and 44.7 % respectively. By 2009, the number of academic staff in the state universities reached to a total of 87,605, among them 12,195 (13.9 %) being professors, 6,580 (7.5 %) being associate professors and 16,365 (18.7 %) being assistant professors (<http://yogm.meb.gov.tr/devletogretimeleman.htm>).

4.2. Research strategy: data sources and retrieving

The well-established higher education infrastructure in Turkey provides an opportunity to analyze a rich data on marketing thought and trends. So for study it was worth to focus on the masters and PhD these stored in the online database of the Council of Higher Education

(YÖK). The aspects presented in the database are structured for creating the bibliographic data set (Noyons, 2005) by following a three step approach (Sanz-Casado et al., 2007):

Step 1: Data acquisition

Under the YÖK website Thesis Center / Thesis Search, a basic search was done by entering the expression “pazarlama” (marketing) in Turkish. The authors consider the search process under ‘pazarlama’ as an overall criterion to the body of marketing theses that serves to the purpose of eliminating limitations in the rhizome (Ecco, 1999) of marketing type knowledge.

On request, an additional data set with basic and advanced search details except university names was provided by the YÖK Thesis Center⁺⁺⁺ in an excel file. This data included many details such as affiliations, advisor names, department/institution/faculty names etc. but only covered years until the end of 2004 and some missing values were present for other areas. The insertions for missing data were done by the researchers on the basis of the information provided on the YÖK’s Thesis Centre website in 2009 in a period of 3 months (February 15 – March 15). As a result, the final data set covered the period between 1980 and 2008.

Step 2: Preprocessing

The information in the formatted file was in Turkish except English keywords corresponding to each thesis. The Turkish keywords linked to the theses were translated separately into English by two Turkish speaking researchers. Inter-translator check was carried out and on very few cases discussions were needed to reach a consensus. Since most of the information was fact based such as affiliations, department/institution/faculty names etc. disagreements were very trivial. It is to note that no priority ranking for the keywords stated by the theses writers exists.

Step 3: Data Cleaning, Consistency and Completion

As mentioned before, the data provided by the YÖK Thesis Centre had missing data in university names, supervisor names and keywords. A research assistant^{\$\$\$} contacted the university libraries and institutes via email and telephone for the missing university and supervisor names. Only very few cases remained without supervisor names. Missing keyword treatment was done in different steps: augmentation, correction, clarification, unification and purification.

Before thesis submission to institutions, graduates are expected to state five keywords in their theses from a “basic list of concepts” provided by the YÖK. However, it was detected that not all theses incorporated a keyword list, or the keywords stated did not sum up to five. In order to reduce the potential risk of insufficient presentation of thesis content due to this problem, a *keyword augmentation* was done. Accordingly, for generating keywords, the authors of the theses were contacted, when not possible, thesis title and abstract were examined by authors.

Keyword corrections were done for spelling errors or ill translation. Also several identical and closely related keywords have been merged under one representative theme category as keyword (e.g. banking sector, banks, banking = banking) during the process of *keyword clarification*. For pursuing the *keyword unification*, same keywords appearing in some thesis as singular and in some others as plural have been replaced with the plural forms. For *keyword purification*, the analytical procedure was pursued by using descriptive analysis (Leydesdorff 2001, Noyons, 2005).

⁺⁺⁺ The authors want to thank from YÖK Ms. Filiz Yılmaz for compiling the excell data and Ms. Güler Kumsel from the library sending them the data.

^{\$\$\$} The authors want to thank Ms. Sibel Aydoğan for her very careful work on completing the data set.

4.3. Structures of the data base

Before starting out with the description and interpretation of the scientometrics related analysis the reader should have an idea of the informational elements (Noyons, 1999) provided by the data base (See Table 1). The overall advisor work is done by 865 professors (full, associate, assistant) from 68 universities where masters and PhD theses under the category marketing were written. Roughly 67.7 % of the work is dedicated to the field of 'işletme' ('management science' or 'business administration') as the first subject.

This field of study also appears as the second or the third subject for thesis presented. In total, 104 first subjects described the areas where marketing theses are related to. It reveals that most of the theses written in marketing area are connected to the field 'business'. Most of the other fields also present a link to business related areas such as tourism, banking, agriculture; but some come from completely different fields such as aviation or mining, reflecting the diversity of the areas of marketing interest. But 86.4 % of the theses written in the field marketing are submitted to Institutes for Social Sciences. Other details are summarized in table 2.

Table 2: General Structure of the data set of marketing theses 1980 – 2008 in Turkey

| Variables | Figures | | Comment |
|--|--|------|--|
| Years | N | % | |
| 1980 – 1988 | 57 | 2.8 | Most of the theses recorded by YÖK have been written during the last 10 years (About 65%). |
| 1989 – 1993 | 210 | 10.5 | |
| 1994 – 1998 | 416 | 20.8 | |
| 1999 – 2003 | 624 | 31.2 | |
| 2004 – 2008 | 693 | 34.6 | |
| Total | 2000 | 100 | |
| Number of Theses | Supervised by professors of different ranks | | For 98.3 % of the thesis written, the academic advisors are known. Among a total of 865 advisors, 65.1 % have supervised one thesis. Only five professors have supervised 20 or more theses. |
| 20 and more | 5 | 0.6 | |
| 10 to 19 | 24 | 2.8 | |
| 5 to 9 | 73 | 8.4 | |
| 2 to 4 | 200 | 23.1 | |
| One | 563 | 65.1 | |
| Name of Advisor N _{Ad} | 865 | 100 | |
| Name of Author N _A = 2000 | 93.7 % of the authors' names appear only once, the rest twice (these authors have written a Masters and PhD thesis). | | |
| Universities in data set N _U = 68 | So far the advisory work in 'marketing' can be located at 68 universities throughout Turkey as far as they are documented by YÖK. | | |
| Language N _L = 2000 | 88.6 % of the theses work done is written in Turkish, followed by about 10.4 % in English; to a much lesser extent in German (0.8 %) and French (0.2 %). | | |
| Type of Thesis N _T = 2000 | Master theses are by far the typical ones, they number up to 84.6 %. PhD dissertations constitute 15.4 % of the thesis work. | | |

5. Bibliometric Results

5.1. Patterns of keyword co-occurrences

The keyword structure shows us a great variety of variables: 85% of the keywords appear more than twice (own computation). As can be assumed the distributions are skewed. According to purification (Leydesdorff; 2001; Noyons, 2005) as mentioned above, a total of 371 keywords remained for further bibliometric analysis. A symmetric keyword by keyword matrix (Chen 2003; Ding et al., 2001), in our case 371 by 371 keywords is the starting point for further analysis. A subsequent cluster analysis of the keywords was assessed by hierarchical

clustering algorithm (Ward) and Euclidean distances based on co-occurrence (for detailed discussion see Everitt, 2001). A visual inspection of the dendrogram yields three distinct keyword clusters. They are of different size. Keyword cluster 1 (KWC1) covers 25 (6.7%) words, KWC2 47 (12.7%), and KWC3 299 (80.6%) of all keywords.

The results of discriminant analysis demonstrated significance of differences (All $\lambda_{\text{wilks}} < 0.05$; All $p_{\text{chi-square}} < 0.05$). The outcome of principal component structuring of Ucinet (Hanneman – Riddle, 2005) corroborates the results of the cluster and discriminant analysis done with SPSS. Additionally, keyword co-occurrences *within* the groups KWC1, KWC2, KWC3 and *between* them are examined as to find the core, semi-periphery and outer space of knowledge structure (Ding et al., 2001; Hanneman – Riddle, 2005). The descriptive analysis for within group indicators (Table 3) reveals that the average density of keywords (for computation see Hanneman – Riddle, 2005; Krackhardt – Stern, 1988) in the core (KWC1) of the network is 5.293. In comparison to KWC1, the keyword intensity drops to 0.676 in the semi-periphery (KWC2 to KWC2) and to 0.044 in the periphery (KWC3 to KWC3).

A similar consideration may be done if one examines the average density of topics for different clusters. As table 3 shows, the average density between the top 25 keywords of the core to the periphery decreases from 1.654 to 0.454 for KWC2 and KWC3 respectively. The hierarchy of keywords reflects that the tie strength between KWC2 and KWC3 (0.139) is larger than the tie strength within KWC3 (0.044).

Table 3: Density measured average tie strength within and between keyword clusters (KWC).

| | KWC1 ($n_{\text{kwc1}} = 25$) | KWC2 ($n_{\text{kwc2}} = 47$) | KWC3 ($n_{\text{kwc3}} = 299$) |
|------|---------------------------------|---------------------------------|----------------------------------|
| KWC1 | 5.293 | | |
| KWC2 | 1.654 | 0.676 | |
| KWC3 | 0.454 | 0.139 | 0.044 |

Note: Wilks $\lambda_{1-2} = 0.000 < 0.05$ Chi-square₁₋₂ = 2421.485; Wilks $\lambda_1 = 0.004$ Chi-square₁ = 1032.497;

All $p_{\text{chi-square}} = 0.000 < 0.05$.

This could implicate that there may be a tendency of topical keywords to move from KWC3 to KWC2. But only a longitudinal tracking of co-occurrences and the development of centrality measures could answer the question entirely (McCulloh - Karley, 2009).

A test of significance (Krackhardt – Stern, 1988) for differences (E-I-Index) regarding within group co-occurrences of keywords and between keyword clusters occurrences, internal ties versus external ties shows $p < 0.05$. Therefore variations in co-occurrences of keywords cannot be attributed just to random variations. If one tests the structural block model (Hanneman – Riddle, 2005) whether the patterns of ties within and between keyword groups differ across topic clusters, it shows that the results reflect a significant fitting of this model to the data on the keyword ties among and between KWC1, KWC2 and KWC3. The explained variance is 20.9 % (Table 4). Beyond fitting statistical models to co-occurrences a content interpretation helps to judge and reflect the underlying patterns. One should keep in mind that according to the network approach used, there is an inter link between the different keyword structures. The links connect across clusters according to the co-occurrences.

Table 4: Structural block model test of differences in keyword group tie density

| R ² | Adjusted R ² | Probability | # of Observations |
|-------------------------|-----------------------------|--------------------------|-------------------|
| 0.209 | 0.209 | 0.0000 | 137270 |
| Regression Coefficients | | | |
| Independent | Un-standardized Coefficient | Standardized Coefficient | Significance |
| Intercept | 0.043658 | 0.000000 | 0.9998 |
| KWC 1-1 | 5.249676 | 0.377917 | 0.0000 |
| KWC 1-2 / KWC 2-1 | 1.610810 | 0.161933 | 0.0000 |
| KWC 1-3 / KWC 3-1 | 0.410523 | 0.101654 | 0.0000 |
| KWC 2-2 | 0.632568 | 0.085946 | 0.0000 |
| KWC 2-3 / KWC 3-2 | 0.095031 | 0.031437 | 0.0184 |
| KWC 3-1* | 0.410523 | 0.101654 | 0.0000 |

* since KWC 3-3 is the residual of the total of all other links, there was no need to present it.

5.2. Visualizations and interpretation of individual keyword clusters

A closer look at the content will provide additional information about the structures of the several keyword patterns of KWC1, KWC2 and KWC3. So far it will be an overall description and interpretation.

KWC1 – “Turkey, distribution channels, problems, and marketing activities” with its central keyword patterns

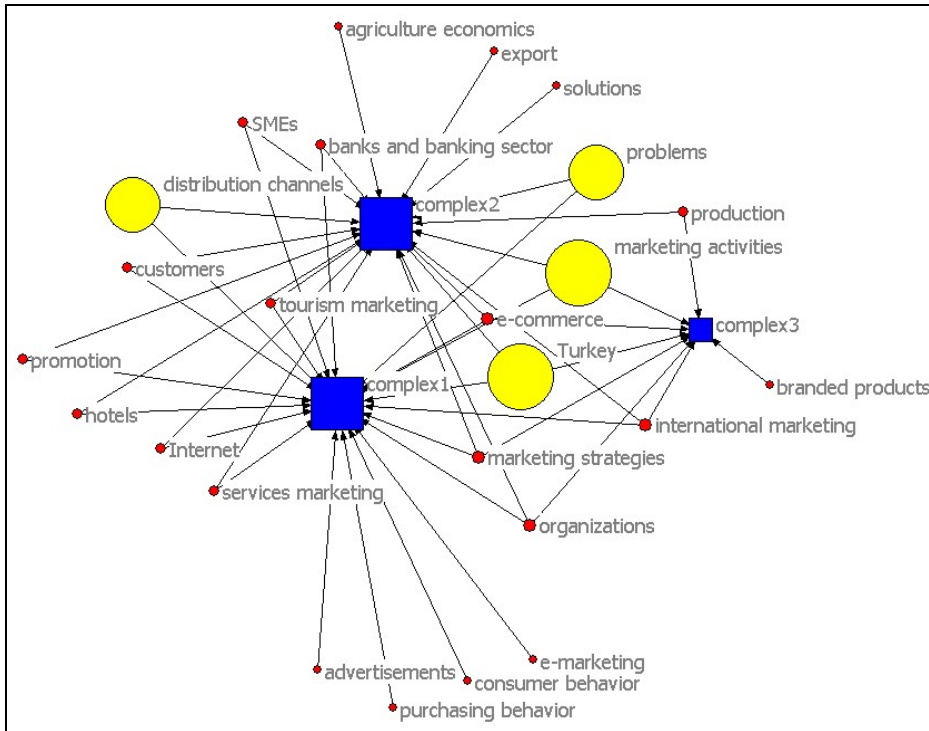
Figure 1 gives a visual inspection of the topical words in keyword cluster KWC1. The most prominent keywords are ‘Turkey’ and ‘marketing activities’ followed by ‘distribution channels’ and ‘problems’. As there are overlapping and hierarchical 25 keywords, the interpretation according to modularity follows a suggestion provided by Shen et al., (2009). Their approach (EAGLE) detects three overlapping and hierarchical keyword combinations or components. Large values of modularity^{****} signal distinct complexes, so Complex3 is the least concise one. What are the communalities and differences in keywords? First of all Complex1

Table 5: Complexes and leitmotif in KWC1 (n_{kwc1} = 25)

| “Turkey, distribution channels, problems and marketing activities” | | |
|--|----------------------------|---------------------------|
| Complex1 | Complex2 | Complex3 |
| N = 21; Modularity = 4.31 | N = 20; Modularity = 2.607 | N = 8; Modularity = 0.261 |

**** Modularity quantifies the quality of a division of a network into modules or complexes. Good divisions, which have high values of the modularity, are those in which there are dense internal connections between the nodes within complexes but only sparse connections between different complexes. See: Fortunato, S. & M. Barthelemy (2007). ["Resolution limit in community detection"](#). *Proceedings of the National Academy of Science of the USA* 104 (1): 36–41. [doi:10.1073/pnas.0605965104](https://doi.org/10.1073/pnas.0605965104)

Figure 1: Granular structure of KWC1



and Complex2 seem to be of equal size (Table 5). The common information is that they are focused mainly on ‘Turkey’ ‘distribution channels’, ‘problems’, and ‘marketing activities’.

In detail, Complex1 indicates exclusively at “purchasing behavior”, “consumer behavior”, “advertisements” and “e-marketing”. Complex2 is focused alone on “agriculture economics”, “export” and “solutions” but both Complex1 and Complex2 share topics such as “SMEs”, “banks and banking sector”, “customers”, “services marketing” “promotion”, “hotels”, “tourism marketing” and “Internet”. Complex3 as the smallest hierarchical structure points exclusively at “branded products”. The overlapping keywords besides “Turkey” and “marketing activities” are “organizations”, “international marketing”, “marketing strategies” and “e-commerce” with both Complex1 and Complex2 and “production” only with Complex2.

Further detailed findings of keyword cluster KWC1 indicate the following: The focus of the theses in the core is the application of knowledge (marketing activities), distribution channels, problems and Turkey. These four main focus areas are related to different sector types (e.g. banks and banking sector, hotels) and company size (SMEs) occurring for Complex 1 and 2, or to some major areas in marketing such as services marketing, tourism marketing (Complex1 and 2) and international marketing (for all three complexes). Complex1, 2, and 3 reflect marketing strategies of organizations in international context. ‘Advertisements’ as part of promotion, e-commerce, and ‘e-marketing’ activities over the Internet relating to customers and purchasing behavior constitute the Complex1. Problems occur only related for Complex 1 and 2 and solution is only relevant for Complex2. In addition to marketing activities in Turkey, a focus on production, branded products and their marketing strategies along with e-commerce and international marketing build up Complex3.

KWC2 – “Competitiveness and Power” and patterns in the semi-periphery

On the basis of 47 keywords the analysis for eliciting complexes and leitmotif (see again Shen et al., 2009) in KWC2 shows four major areas. They are hierarchical and have an overlapping

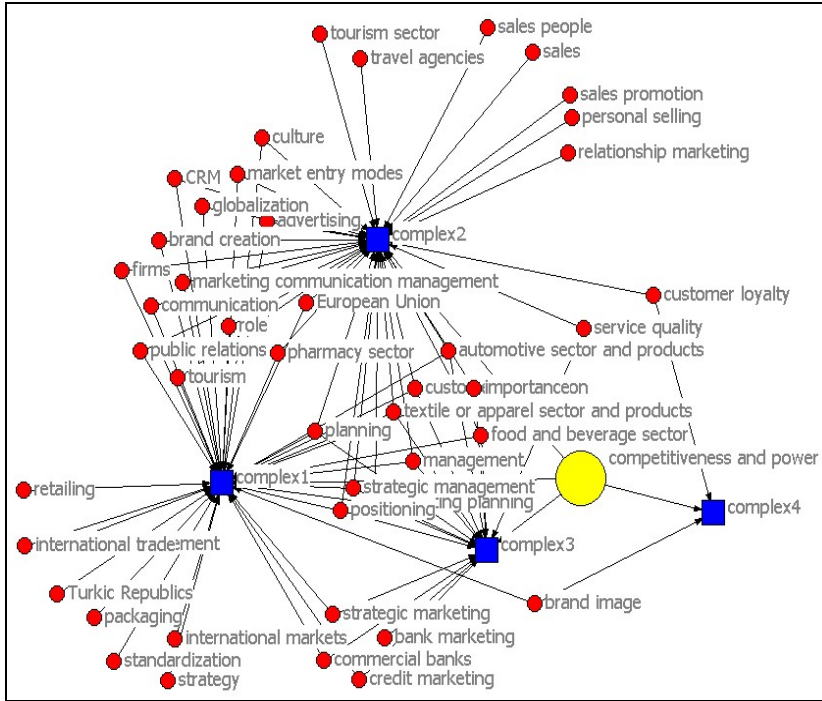
structure. The only dominating keyword is “competitiveness and power”, since it is centrally present in every complex (Figure 2).

The modularity of the complexes 1 and 2 are quite similar (Table 6). By inspecting Complex1 and its granular structure one can easily detect the unique focus on ‘international trade’, ‘international management’, ‘international markets’, ‘standardization’, ‘Turkic republics’, ‘strategy’ and ‘retailing’. The link of Complex1 to Complex2 is based on a variety of concepts. Such as ‘market entry modes’, ‘globalization’, ‘culture’, and ‘European Union’ as an extension of the international perspective. Complex1 further shares a brand focus e.g. ‘brand creation’ with Complex2 and ‘brand image’ with Complex4. Sector related issues can be listed as ‘automotive sector and products’, ‘food and beverage sector’, and ‘textile and apparel sector and products’ shared by the first three complexes. ‘Advertising’, ‘communication’, ‘marketing communication management’, ‘public relations’, ‘CRM’ are themes common to Complex1 and 2. Complex2 sets little different accents. They stress the role of ‘relationship marketing’. ‘sales’, ‘sales people’, ‘sales promotion’ and ‘personal selling’. The sectoral focus of Complex2 depicts travel agencies along within the tourism. Another view is added by ‘customer satisfaction’, ‘service quality’ and ‘customer loyalty’, where Complex2 communicates also with the other Complexes one after the other in increasing order. Complex3 emphasizes ‘credit marketing’, ‘commercial banks’ and ‘bank marketing’ with ‘strategic marketing’ shared all these with Complex1. The last small Complex4 closes the link with ‘brand image’ to Complex1 and via ‘customer loyalty’ to Complex2. These granular structures are interwoven via multiple links in KWC2, which has as leitmotif “competitiveness and power” as stated before. Other overlapping themes are such as ‘marketing planning’, and ‘strategic management’

Table 6: Complexes and leitmotif in KWC2 ($n_{kwc2} = 47$)

| “competitiveness and power” | | | |
|-------------------------------|-------------------------------|-------------------------------|------------------------------|
| Complex1 | Complex2 | Complex3 | Complex4 |
| N = 37; Modularity = 2.705 | N = 36; Modularity = 2.828 | N = 21; Modularity = 0.665 | N = 3. Modularity = 0.061 |

Figure 2: Granular structure of KWC2



KWC3 – “Buyer Preferences” and other keywords at the periphery

While the first two keyword patterns KWC1 are coined by ‘marketing activities’ and ‘Turkey’ followed by ‘distribution channels’ and ‘problems’ and KWC2 respectively with ‘competitiveness and power’ the third pattern KWC3 is placed around the leitmotif “buyer preferences”. However, according to the number of keywords assembled in KWC3 the structures are quite more complex. A granular analysis which detects overlapping and hierarchical patterns (Shen et al., 2009) is used clearing the complex picture (Figure 3). The five keyword sub clusters have different breath. The most comprehensive is Complex1 = ‘buyer preferences’ that is followed by Complex4 = ‘marketing mix’, Complex2 = ‘pricing’, Complex3 = ‘marketing management’, and Complex5 = ‘efficiency’ (Table 7).

Table 7: Complexes and leitmotifs in KWC3 (n_{kwc3} = 299)

| Complex1 | Complex2 | Complex3 | Complex4 | Complex5 |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|
| “buyer preferences” | “pricing” | “marketing management” | “marketing mix” | “efficiency” |
| n = 176; modularity = 2.159 | n = 112; modularity = 1.005 | n = 110; modularity = 0.642 | n = 131; modularity = 0.388 | n = 13; modularity = 0.254 |

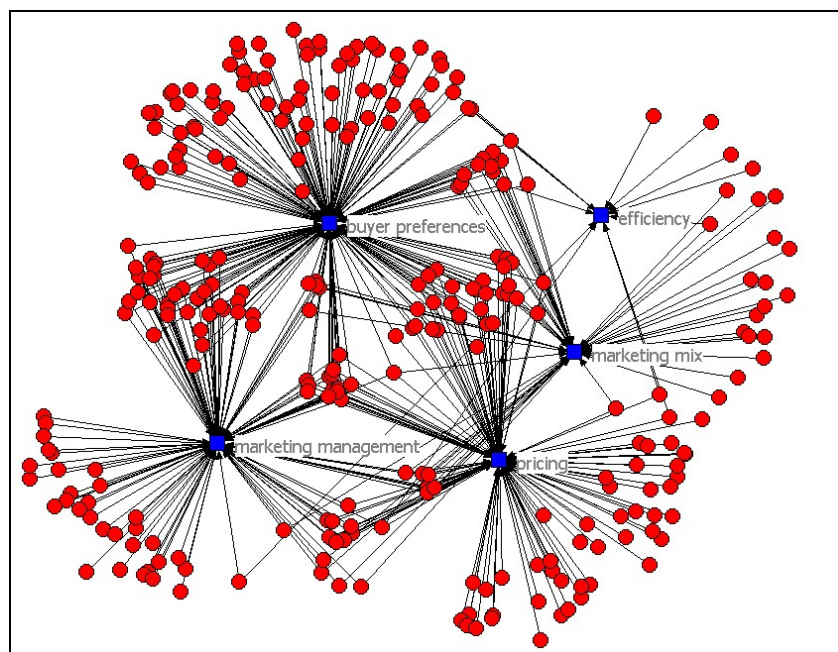
How to proceed in the interpretation of the results? A look at communalities and differences might be an appropriate way (Shen et al, 2009) in interpreting the research findings for KWC3.

Firstly, in comparison to the other KWC-structures, here KWC3 covers the consumer behavior side of marketing with ‘buyer preferences’ as seen in Complex1. While KWC2 covers marketing topics in Turkey in the arena of local and global competition, the third one (KWC3) points at the consumers’ needs, preferences, attitudes and beliefs. Keywords such as “customer expectations”, “customer focus”, “customer profiles” and “customer relations” underline the orientation of KWC3.

Secondly, the patterns also reveal a strong local and sector specific connections. For instance names like Ankara, Antalya, Mugla, Bursa, Aegean region, Istanbul, Izmir co-occur at certain times with sector specific differentiation. The later argument covers industries and goods such as: agriculture sector, agriculture and food products, poultry husbandry and products, beverages sector and products along with dairy industry; financial sector and services, retail banking along with broker organizations; hospitals and health care services, insurance agencies, tourism organizations; industry and manufacturing sector, construction sector, durable consumer goods sector, computer sector and computers along with white goods sector; fashion sector, shoe sector and some others.

When ‘pricing’ (Complex2) is related to other components it has exclusive links to the topic “agriculture industry” via “agricultural marketing”, “agricultural organizations”, “agriculture cooperatives”. Further to mention are “agriculture products” or “animal breeding and related products”, “poultry husbandry and products”, “milk” and “dairy products”. Besides the national and international (e.g. “export marketing” and “export performance”) “logistics and distribution related issues”, “storage”, “suppliers”, and “supply chain management” as well as “product quality” and “productivity” add to the explanation of that “pricing” complex of KWC3. The component ‘marketing management’ (Complex3) has a strong link to ‘buyer preferences’ (Complex1) by “marketing segmentation”, “target market”, “communications strategies”, “mass media”, “media”, “product design”, “brand loyalty”, “brand preference”, “consumer protection”, “purchasing” along with “department and chain stores” and “hypermarkets”.

Figure 3: Granular structure of KWC3



Note: The reader should be aware of that due to the co-occurrences within the keyword structure of KWC3 a keyword may appear several times in different complexes.

Further links between ‘buyer preferences’ of Complex1 and ‘marketing management’ of Complex3 are observed for the following keywords: “marketing tools and techniques”, “mobile marketing”, “data based marketing”, “data mining”, “environmental marketing”. And as to mention besides that link, “direct marketing”, “distribution systems”, “industrial goods”, “industrial marketing”, “industrial organizations”, “marketing controlling”, “nice marketing”, “strategic analysis” complement the description of the granular structure. Regarding regions and cities, Istanbul, Erzurum, Kütahya and Malatya are named here.

'Marketing mix', Complex4 has the strongest link to 'buyer preferences', Complex1. The smallest component 'efficiency' (Complex5) covers issues such as "agency system", "product life cycle", "standards", "statistical techniques and analysis" and "structural equation model" as well as "effectiveness", "effect" and "effective factors" are incorporated in Complex1, the "buyer preferences".

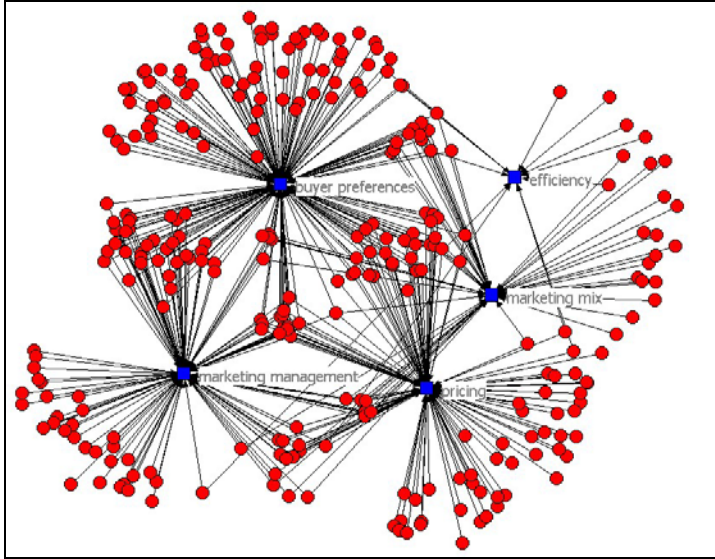
Looking at the overall picture in Figure 3, it is seen that the 'most complex' structure is present for KWC3. So to some extent it describes in detail and specifies the issues marketing management has to deal with. The topics do not cover exclusively the controllable factors of marketing management. It describes also in detail the uncontrollable (e.g. sector specific and location specific) factors. The two first areas, namely KWC1 and KWC2, covered by the theses work set up the 'big' framework. They give the direction for the agenda in theses written whereas the last one, KWC3, specifies and supplements them as their periphery.

Discussion and Conclusion

Regarding the three objectives of the study, different analyses were done. First of all we have to be aware of, that our attempt to depict the marketing thought bases on theses keywords starts with the 1980's. There is a 'marketing time' before the 1980's. In this time before the focus of academic literature (see chapter 2.) could be assumed to be on promotional efforts e.g. advertising, media and its tools, trade fairs; brand issues, standardization in marketing activities; transportation and warehousing along with buyer motifs and behavior. The literature in the 1960's also reflects a significant interest on sales management, marketing strategy, its problems and marketing research. Besides that the period signifies studies on tourism and agricultural marketing. The academic interest in the 1970's as far as it can be reconstructed concentrated on the 4 P's, and the concept of logistics, suppliers, and channel management. It further explored the concepts of industrial marketing, marketing planning and research, and international marketing.

The overall picture of the bibliometric research results shows three major dimensions: "Turkey, distribution channels, problems, marketing activities" (KWC1), 'competitiveness and power' (KWC2), and 'buyer preferences' (KWC3). The main structures of KWC1, KWC2, and KWC3 of the bibliometric findings give the robust directions of the marketing interest, incorporated in master and PhD theses work. By cautionary interpretation the findings offer some plausibility for the importance of the scholarly marketing interests of an emerging market country as Turkey is. KWC1 demonstrates a more or less clear cut picture emphasizing the 'distribution et al. matter' in Turkey. The more diverse is the knowledge body worked out in KWC2, which is centred on 'competition and power'. The most diverse matter develops at KWC3 and all the issues related to 'buyer behaviour'. Several reasons might be due for that development. It is important to note that the number of universities in Turkey increased in the 1990's compared to the 1980's. The increase continued in the new millennium. In the marketing managerial world new priorities were set by the development of the economy. In short it can be stated that regarding the topics chosen for Masters or PhD studies, the students are highly interested in the trendy developments taking place in the Turkish market and the world. Scholarly writing on thesis level in Turkey apparently matches the expectations and demands of the managerial field of applied marketing (see Maclaran et al, 2010) which is in it an important aim of marketing science.

Figure 3: Granular structure of KWC3



Note: The reader should be aware of that due to the co-occurrences within the keyword structure of KWC3 a keyword may appear several times in different complexes.

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