Daftar Isi

Socio-distribution Network Analysis: an Exploratory Study of Indonesian Magazine Distribution Channel

Oki Sunardi
Department of Industrial Engineering, Krida Wacana Christian University

Jann Hidajat Tjakraatmadja
School of Business and Management, Institut Teknologi Bandung

Abstract

Indonesian magazine business is characterized by high distribution cost, which constitutes of 60%-70% of the overall enterprise cost. This study aims to investigate the key agents who play significant roles to the distribution coverage in Indonesian magazine market, using social network analysis perspective. Data of 90 agents were collected from five respected publishers of four different major cities. Using 'roster recalls method', within 16 months period, 90 agents were interviewed by six field researchers, concerning their social relationship, family relationship, professional/working relationship with other agents. The study found that there are six key agents whose networks will be able to penetrate the Indonesian magazine market. By using only the identified key agents, publishers estimate that 31%-41% of distribution cost could be saved. Future related researches are also suggested in the final conclusion.

Keywords: magazine, distribution channel, social network analysis, key agents

Abstrak

Bisnis penerbitan majalah di Indonesia ditandai dengan tingginya biaya distribusi, yang mencapai 60%-70% dari keseluruhan biaya operasional perusahaan. Studi ini bertujuan menginvestigasi agen-agen kunci yang berperan sebagai "klik" dalam jaringan distribusi di pasar majalah Indonesia, dengan memanfaatkan teknik analisis jaringan sosial. Data terhadap 90 agen majalah yang terlibat dalam jalur distribusi majalah di Indonesia diperoleh berdasarkan informasi dari lima penerbit majalah di empat kota besar di Indonesia. Dengan menggunakan 'roster recall method' dalam periode 16 minggu, dilakukan wawancara terhadap 90 agen oleh enam peneliti lapangan. Studi ini mengidentifikasi enam agen kunci

yang memegang kendali dalam penyebaran majalah di seluruh Indonesia. Dengan hanya memanfaatkan enam agen kunci tersebut, penerbit majalah mengestimasi bahwa biaya distribusi dapat dihemat antara 31%-41%. Berdasarkan studi ini, beberapa studi terkait diusulkan.

Kata kunci: majalah, jalur distribusi, analisis jaringan sosial, agen kunci.

1. Introduction

Indonesian publishing business is considered started in 1914, as *De Cranie*, a magazine that focused on the aspiration of administrative employees was first published. After that, Perintis, a bi-weekly magazine targeted to drivers was introduced. Due to the development of Indonesian economics condition, the magazine publishing business became more productive. In 1980, David Sparkers, an expert consultant from Indonesian Research Bureau, argues that the improvement of Indonesian business magazine is determined by two main factors. First, the Indonesian economic condition was positively increasing, which allowed the people to spend more on magazine. Second, the demographic layer of teenagers from 15-19 years of age was the highest in number at that time, and they have experienced a better education system. This condition enabled them as potential readers or buyers of magazine products (Junaedhie, 1995).

The existence of television once disturbing the sustainability of magazine in general, but it did not have a significant impact to mass magazine and segmented weekly magazines (Rivers, 1983). As of January 2012, there are 1009 listed-publishing enterprises, which 219 of them are magazine publishing enterprises *(source:www.ikapi.com)*. Today's Indonesian magazine publishing business is characterized by several conditions. First, high distribution cost, which constitutes 60%-70% of the overall enterprise cost. Second, the rise of internet era has made a contribution to the stagnant of the printed-publishing business. These condition affect most of the publishing enterprises, especially those with limited brands.

2. Problem Formulation

Preliminary study was conducted to five publishing enterprises from four major cities. The aim of the preliminary study is to confirm the major obstacles described before. The preliminary study found that the first condition (i.e., distribution cost) is considered the main problem to all the selected publishers. The second condition (i.e., the rise of internet era) is considered the "out-of-reach" condition. Table 1 represents the distribution cost, production rate, sales rate, and number of agents utilized, all in average.

Table 1. Comparison of distribution cost, production rate, number of agents, and sales rate (in average)

No.	Publisher Code	Production Center	PPP	PODC	NOA	POS
1	LMY010	Yogyakarta	10.000	65.7%	47	71.0%
2	JPS004	Surabaya	10.000	69.2%	50	72.0%
3	NMB025	Bandung	15.000	65.7%	51	75.0%
4	EMJ006	Jakarta	25.000	65.0%	72	71.0%
5	FGJ001	Jakarta	40.000	67.0%	90	78.0%

Source: interview to five publishing company

PODC: *Cost of Distribution as a Percentage of Overall Cost (percent)*
NOA: *Number of Agents Directly Distributed (agents)*
PPP: *Average Published Quantity per Period per Brand (copies)*
POS: *Average Percentage of Sales (percent)*

The cost of distribution is ranged from 65% to 70% and it is considered as the critical problem to publishers. The cost structure is divided into three major parts: carrying cost (70%-75%), returning cost (10%-15%), and collecting cost (15%-20%). Carrying cost is the major expense to the whole distribution cost. The carrying cost is determined by the number of agents employed to distribute the products. According to the publishers, the ideal total distribution cost should be ranged from 30%-45%, so that they are able to achieve at least 15% of profit from the sales, which is considered the minimum profit level to be survive in the business. As stated by Green (2011), the ideal distribution cost within distribution network is should be ranged between 35%-50%. Moreover, the preliminary study reveals that all of the selected publishers are bounded to the contract with "media-advertising buyer" that their magazines must be found in all major cities in Indonesia.

3. Research Questions and Objectives

The preliminary study has lead to several main problems to be addressed. First, the publishers are in urge to select the best possible distribution channels (i.e., the best agents) so that their product will be distributed widely all over Indonesia. Second, the use of distribution channels should deliver to the optimization of distribution cost. Therefore, this study investigates the following research questions:
   RQ1:*"Who are the key agents which play significant roles to the distribution coverage?"*
   RQ2: *"Will the use of identified key agents deliver to a better distribution cost?"*
Thus, the objectives of the study is to explore the social networks, as well as the distribution networks among the magazine distribution agents who have the capability to play as key distributors to cover Indonesian magazine market. Since distribution cost consist of 65%-70% of the overall companies cost, identifying key agents would be very helpful to develop more efficient distribution networks, which will help reducing the distribution cost.

4. Theoritical Background

Distribution activity is one of the key issues in supply chain network. As an important step that connects the suppliers to customers, distribution channel is considered as a network of flows which embrace actual movement of product, title, and information (Bowersox & Morash, 1989). Bowersox & Morash (1989) argue that in supply chain activity the number of distribution channels does not guarantee the effectiveness of distribution activity. The effectiveness of a distribution network is also determined by knowledge shared within the network. Understanding social network within a supply chain network is considered one of the determining factors that offers a competitive advantages for supply chain partners (Crone & Roper, 2001; Cheng et al., 2008; Wu, 2008). Carter et al. (2007) suggests that knowledge of social networks can be utilized to identify the network collaboration within a social system.

A social system is formed by informal relation, communication ties, business cooperations, and knowledge sharing activities between the actors within the system (Williams & Hummelbrunner, 2009). Sosial network analysis is a set of tools to analyze a social system, to understand networks and their participants, to simulate interdependence among actors (Scott, 1991; Williams & Hummelbrunner, 2009). Moreover, Scott (1991) affirms that social network analysis is a method that explores the connections between the social actors through analysis of the structure of the social network, with the use of relational data. Relational data consist of the contacts, links, or information that is exchanged between actors, which relate one actor to another.

The interdependence between actors can be drawn into a graphical model called sociogram. Studies on social network analysis (SNA) have been developed since 1930's. SNA was developed, initially, in term of anthropology study (Scott, 1991). Later on, a principal report on the Hawthorne studies (Roethlisberger and Dickson, 1939, in Scott, 1991) described various sociograms constructed by a research team, to see the relationship among employees of a bank wiring room, as opposite to the formal organization chart. In the report, sociograms were constructed to show aspects of group behavior (i.e. Involvement in games, controversy over the opening of windows, job trading, helping, friendships, antagonisms). In fact, the Hawthorne study was considered a major pilot study using sociograms to describe actual relations observed in real situations. In the sociograms reported, the use of 'circle' and 'arrow' was introduced. Circles represent people, and arrows represent relationships (Scott, 1991).
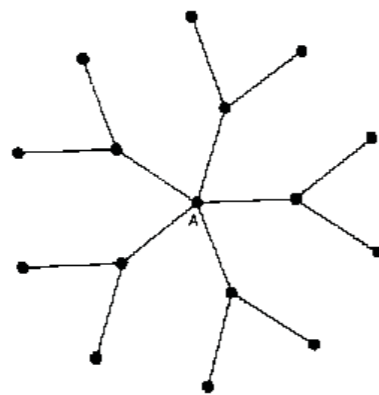

Figure 1. A Sociogram: the Sociometric Star

Source: Scott (1991)

In business context, several prominent studies have been carried out using SNA. In a study of the effectiveness of word-of-mouth marketing of consumer products, Reingen & Kernan (1986) found that assessment of a network's prestige, subgroups, and flows of information using word-of-mouth referrals should be able to identify the key actors of the word-of-mouth process. Another study by Iacobucci & Hopkins (1992) found that SNA could be used to analyze the source of power, the cooperation pattern, the conflict resolution flow, and the management of expectations within the word-of-mouth marketing networks. These studies found that word-of-mouth marketing works effectively through 'social relations'.

In supply chain studies, several researchers suggest that in order to develop an efficient and responsive supply chains, cooperation and long term relationship among actors in the supply chain are mandatory (Gunasekaran et al., 2001; Ozkul & Barut, 2009). This condition can be achieved whenever every actor in the supply chain act as professional. In other words, 'professional relationship' should be maintained. Another important study in supply chain management was conducted by Borgatti & Li (2009). They found that actors in the supply chain networks represent entities at various levels of collectivity, such as persons, families, companies, and countries. It seems that 'family relationship' is one critical factor which creates trust and long term relationship in the supply chain network.

Specific studies in social network analysis, with focused on magazine distribution business have never been listed in any literatures. Thus, this study will try to implement SNA in magazine distribution channel in Indonesian context. Factors such as 'social relationship', 'family relationship', and 'professional relationship' will be used in this study as the basis for data gathering and analysis.

5. Methodology

This study comprised of exploratory study. No previous studies are found that explain the distribution network in Indonesian magazine business, nor the database that is published which describes the social networks among the agents. Neuman (2006) states that one of the benefits through conducting exploratory study is to discover and identify relationships among dimension of the phenomenon being studied. The purpose of exploratory study is to establish what is the nature of the problem under investigation.

The study was developed through several steps: Step1, to confirm the recent phenomena in the magazine distribution business. Five informants were selected from different major cities in Java. These informants (i.e. distribution managers from publishing companies) were selected based on their product brands leadership position from five different categories (i.e. women magazine, business, entertainment, agriculture, and artist/gossip), and their willingness to participate in this study. These categories were selected considering that those categories generate 82% market share of Indonesian magazine business (source: Nielsen Media Research 2010). In-depth interviews were conducted to distribution managers, as the main method in this step. The interviews were expected to provide related data on distribution costs, sales rates, and agents involved in their distribution networks.

Step 2, to explore the social networks, as well as the distribution networks among agents. In this step, informal in-depth interviews were conducted to agents. *Based on Yin (2003), exploratory study aims to understand the processes and environment of a network, and also identify some key factors that play important role in the value chain. Therefore, gathering qualitative data is needed by conducting an individual in-depth interview. The strong point of in-depth interview is that it produces communication between interviewee and the researcher (Walliman, 2006; Newing, 2011). The interviews session will depend on the situation. Therefore, in-depth interviews will be performed individually.*

There are approximately 134 listed printed-media distribution agents in Indonesia, which 90 of them are focusing themself in magazines distribution (source: www.ikapi.com). Ninety agents are selected from all over Indonesia, based on the data provided by five publishers from step 1. This means that from 90 magazine distribution-agents available in Indonesia, all will be used as object of analysis. Moreover, this step aims to describe the relationship among agents, and to find the key agents who have the ability to act as key distributors. Three factors will be included: social relationship, family relationship, and professional relationship. Step 3, to confirm the finding in step 2. The confirmation is done through in-depth interviews to selected key agents identified from step 2, and also to publishers in order to evaluate the distribution cost structure. The aim is to get direct feedback that can make sure of the findings.

6. Data Analysis

Data of social connections, family relations, and working relationships were collected using 'roster recalls method' (Giuliani & Bell, 2005; Morrison & Rabelotti, 2009; Capó-Vicedo et al., 2011). In this method, the researcher provides a full list of distribution agents to any agents being interviewed, and ask them concerning their relation with any of the agents on the list (i.e. social relationship, family relationship, professional/working relationship). Data then inputted and analyzed using Social Network Analysis software (i.e. NetMiner v3.0).

NetMiner is a software tool for exploratory analysis and visualization of large network data. The networks are then presented visually in form of sociograms (Figure 3-9).
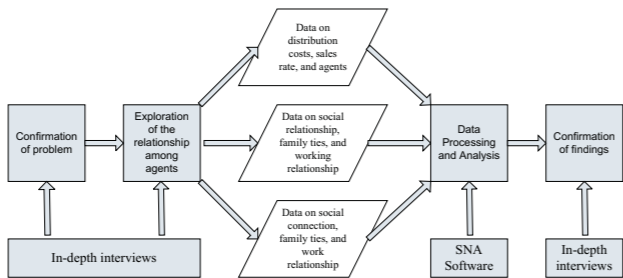

Figure 2. Research framework

7.   Findings and Analysis

7.1. Distribution Agents

Distribution agents utilized by five publishers are first identified. The lists of agents are as follows:

Table 2. Distribution agents employed by publishers

No.	Agent Code	Distribution Center	LMY010	JPS004	NMB025	EMJ006	FGJ001
1	JKT001	Jakarta	yes	yes	yes	yes	yes
2	JKT002	Jakarta	yes	yes	yes	yes	yes
3	JKT003	Jakarta	no	yes	yes	yes	yes
4	JKT004	Jakarta	yes	no	yes	no	yes
5	JKT005	Jakarta	yes	no	no	no	yes
6	JKT006	Jakarta	no	yes	yes	yes	yes
7	JKT007	Jakarta	no	yes	yes	yes	yes
8	JKT008	Jakarta	yes	no	no	yes	yes
9	JKT009	Jakarta	no	yes	yes	yes	yes
10	JKT010	Jakarta	no	no	no	no	yes
11	JKT011	Jakarta	yes	no	no	yes	yes
12	JKT012	Jakarta	no	no	no	no	yes
13	JKT013	Jakarta	no	no	no	yes	yes
14	JKT014	Jakarta	yes	yes	yes	yes	yes
15	JKT015	Jakarta	yes	no	no	no	yes
16	JKT016	Jakarta	yes	yes	yes	yes	yes
17	JKT017	Jakarta	yes	no	no	yes	yes
18	JKT018	Jakarta	no	no	no	yes	yes
19	BGR001	Bogor	yes	yes	yes	yes	yes
20	BGR002	Bogor	no	no	no	yes	yes
21	BDG001	Bandung	yes	yes	yes	yes	yes
22	BDG002	Bandung	no	yes	yes	yes	yes
23	BDG003	Bandung	yes	yes	no	no	yes
24	BDG004	Bandung	yes	yes	yes	yes	yes
25	CRB001	Cirebon	yes	no	yes	yes	yes
26	CRB002	Cirebon	no	no	no	yes	yes
27	SMG001	Semarang	yes	yes	yes	yes	yes
28	SMG002	Semarang	yes	yes	yes	yes	yes
29	SMG003	Semarang	no	no	no	yes	yes
30	SLT001	Solo	yes	yes	yes	yes	yes
31	SLT002	Solo	yes	yes	yes	yes	yes
32	SLT003	Solo	yes	no	no	no	yes
33	SLT004	Solo	yes	no	no	no	yes
34	YGY001	Yogyakarta	yes	no	no	yes	yes
35	YGY002	Yogyakarta	yes	yes	yes	yes	yes
36	YGY003	Yogyakarta	yes	yes	yes	yes	yes
37	YGY004	Yogyakarta	yes	yes	yes	yes	yes
38	YGY005	Yogyakarta	yes	no	no	no	yes
39	YGY006	Yogyakarta	yes	yes	yes	yes	yes
40	SBY001	Surabaya	yes	yes	yes	yes	yes
41	SBY002	Surabaya	yes	yes	yes	no	yes
42	SBY003	Surabaya	yes	no	no	no	yes
43	SBY004	Surabaya	yes	no	no	yes	yes
44	SBY005	Surabaya	yes	no	no	yes	yes
45	SBY006	Surabaya	yes	no	no	yes	yes
46	SBY007	Surabaya	No	yes	yes	yes	yes
47	SBY008	Surabaya	No	no	no	yes	yes

Table 2. Distribution agents employed by publishers (continue)

No.	Agent Code	Distribution Center	LMY010	JPS004	NMB025	EMJ006	FGJ001
48	SBY009	Surabaya	No	no	no	no	yes
49	MLG001	Malang	yes	yes	yes	no	yes
50	MLG002	Malang	No	no	no	yes	yes
51	MLG003	Malang	yes	no	no	yes	yes
52	MLG004	Malang	No	no	no	yes	yes
53	DIA001	Aceh	No	yes	yes	yes	yes
54	DIA002	Aceh	No	no	no	yes	yes
55	MDN001	Medan	yes	yes	yes	yes	yes
56	MDN002	Medan	yes	no	no	no	yes
57	MDN003	Medan	no	yes	yes	yes	yes
58	MDN004	Medan	no	yes	yes	yes	yes
59	MDN005	Medan	no	no	no	yes	yes
60	MDN006	Medan	no	no	no	no	yes
61	PDG001	Padang	yes	yes	yes	yes	yes
62	PDG002	Padang	no	no	no	no	yes
63	PDG003	Padang	no	yes	yes	yes	yes
64	JMB001	Jambi	no	yes	yes	yes	yes
65	JMB002	Jambi	no	no	no	yes	yes
66	PKN001	Pekanbaru	no	yes	yes	yes	yes
67	PKN002	Pekanbaru	no	no	no	yes	yes
68	BTM001	Batam	yes	yes	yes	yes	yes
69	BTM002	Batam	no	no	no	yes	yes
70	LMP001	Lampung	yes	yes	yes	yes	yes
71	LMP002	Lampung	no	yes	yes	no	yes
72	LMP003	Lampung	no	no	no	yes	yes
73	PNT001	Pontianak	yes	yes	yes	yes	yes
74	PNT002	Pontianak	no	no	no	yes	yes
75	BNJ001	Banjarmasin	yes	yes	yes	yes	yes
76	BNJ002	Banjarmasin	no	yes	yes	yes	yes
77	SAM001	Samarinda	yes	yes	yes	yes	yes
78	SAM002	Samarinda	no	no	no	yes	yes
79	MKS001	Makasar	no	yes	yes	yes	yes
80	MKS002	Makasar	yes	yes	yes	yes	yes
81	PAL001	Palu	no	yes	yes	yes	yes
82	MND001	Menado	no	yes	yes	yes	yes
83	MND002	Menado	no	no	no	yes	yes
84	KEN001	Kendari	no	yes	yes	yes	yes
85	MAL001	Maluku	no	yes	yes	yes	yes
86	SOR001	Sorong	yes	yes	yes	yes	yes
87	BIA001	Biak	no	yes	yes	no	yes
88	JAY001	Jayapura	no	no	no	yes	yes
89	BAL001	Bali	yes	yes	yes	yes	yes
90	BAL002	Bali	yes	yes	yes	yes	yes

There are 90 agents listed by FGJ001, the largest publishing enterprise among the five respondents. This list then compared to the other lists provided by other publishers (see table 2). "Yes" means that certain agent is linked to certain publisher, while "No" means no connection between agent and publisher. Interestingly, no other agents are utilized outside the list provided by FGJ001. In fact, FGJ001 distributes their products to all listed magazine distribution agents available in Indonesia. This means that by analyzing agents provided by FGJ001, all respondents will be covered. The social networks analysis in the next step will use the list, which consists of 90 agents.

7.2. Social Networks Analysis

The social network analysis is the longest and hardest process in this research. The analysis was conducted by six field researchers in 16 months period. At first, types of relationship are coded: 0 (no relationship), 1 (social relationship), 2 (family relationship), and 3 (professional relationship).

Then, the researchers provide a full list of distribution agents (nodes) to any agents being interviewed, and ask him concerning his relation with any of them on the list. A '90x90' size matrix was developed which comprises of 90 nodes. A node represent an agent. Table 3 is an example (partial) of the '90x90' size matrix recorded by researchers.

Table 3. Relationship matrix

Nodes	JKT001	JKT002	JKT003	JKT004	JKT005
JKT001		0	1	0	0
JKT002	0		0	0	0
JKT003	1	0		0	0
JKT004	0	0	0		0
JKT005	0	0	0	0	

For example, from the above table, relation between node JKT001 and node JKT003 is 1, which means 'there is a social relationship occurs' among them. Each occurrence then further explored through interview. In this example, JKT001 and JKT003 are gambling partners who meet every week. Every time they meet, certain subjects will be discussed. This is when information concerning magazine business is exchanged. In fact, they agree not to be involved in any professional relationship because they assumed it will ruin their friendship, as happens most of the time when gambler doing business with gambler.

Data from 90x90 matrix then exported to NetMiner v3.0. The next step is to measure the "Degree of Centrality" of each node. Degree of Centrality is a measurement for centrality of each node based on "how many direct neighbors a node have". The SNA found that among the 90 agents, there are four agents in Jakarta, one agent in Makasar, and one agent in Surabaya that play as "clicks" in the distribution networks. The list of "click" agents is as follows:

Table 4. Agents that play as "clicks" in the social networks and distribution networks

No.	Agent Code	Distribution Center	Coverage Areas
1	JKT001	Jakarta	Central Jakarta, North Sumatra, Aceh, Pekanbaru, Lampung, Banjarmasin, Balikpapan
2	JKT003	Jakarta	West Jakarta, North Jakarta, Greater Jakarta, Central Java, Bengkulu, Jambi, Batam, Pontianak.
3	JKT014	Jakarta	East Jakarta, Yogyakarta, Palembang, Samarinda.
4	JKT018	Jakarta	South Jakarta, West Java
5	SBY007	Surabaya	East Java, Bali, Nusa Tenggara, Papua
6	MKS002	Makasar	Sulawesi Island, Maluku

In this study, since 'distribution' is the main activity, then 'professional relationship' is used as 'main variable' to identify the 'degree of centrality' of each agent. The connections among nodes in the network are re-visualized in sociograms as graphed in figure 3-9. Social relationship is represented by red line, family relationship by blue line, and professional relationship by black arrow.

In figure 3, there are four agents scored the highest 'degree of centrality' (i.e. JKT014 (4.25), JKT003 (4.2), JKT001 (4.35), JKT018 (4.5)). From the scale of 5, and 4 is set automatically as the bottom limit to the degree of centrality, it is discovered that these four agents, professionally, act as the main suppliers, as described by black arrows. These four agents are called 'clicks'.

A key agent doesn't always act as a supplier. Sometimes, he receives a product from another agent. This is a common case among magazine distribution agents, especially when a certain product is published by a publisher from outside Java. For example, in figure 3, while agent JKT014 is identified as 'main supplier', he also act as a buyer from agent JKT015. From the interview, it is found that a certain publisher once asked agent JKT014 to be a distributor. This proposal was refused because agent JKT014 was not sure that the product was 'saleable'. After five years on the market, the product seems marketable, and to 'save his face', he asked another agent (i.e. JKT015) to be his supplier.
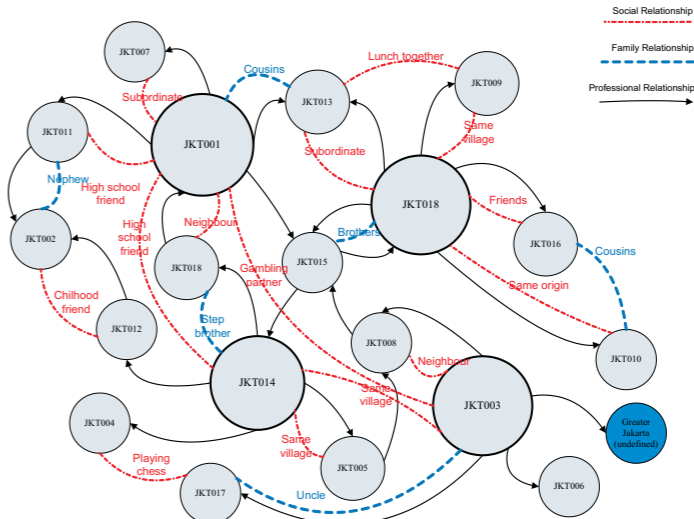

Figure 3. Socio-distribution Networks, Jakarta

Figure 4 represents the socio-distribution network in East Java. There is only one agent identified as the 'click' (i.e. SBY007 (4.05)). The sociogram describes that sometimes overlapping occurs in a distribution network. For example, agent SBY007 supplies directly to MLG004 and MLG002, both in Malang area. In fact, MLG002 is also a supplier to MLG004. By supplying only to MLG002, actually, MLG004 will also received the same products. The reason is that, apparently, MLG004 is related to SBY007 as husband and wife, as described by blue line. In other words, overlapping in distribution network might occur due to family relationship.
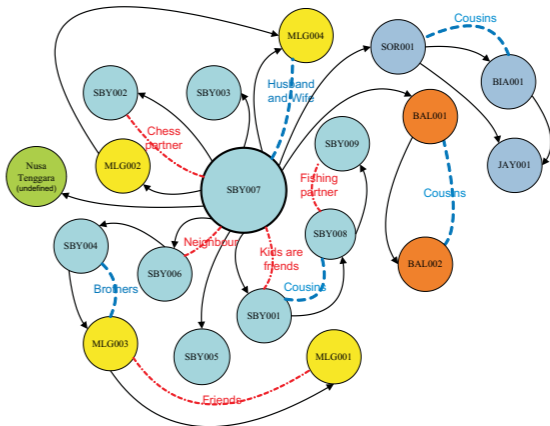

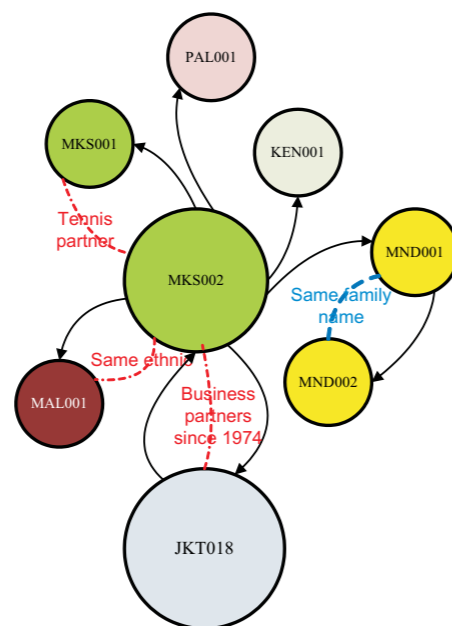Figure 4. Socio-distribution Networks, East Java

Figure 5. Socio-distribution Networks, Sulawesi

Figure 5 represents socio-distribution network in Sulawesi. There is one agent identified as 'click' (i.e. MKS002 (4.15)). The most important finding is that agent MKS002 develops a close professional relationship to agent JKT018 from Jakarta. In other words, they act as supplier and buyer mutually. If one product is entrusted to JKT018, then MKS002 will also be supplied, and vice versa. It is found that this professional relationship is developed since 1974, when their father were both only retailers.

Figure 6 describes the socio-distribution network in Kalimantan. Kalimantan shows a very interesting fact, that there is no certain agent that plays as a 'click'. In fact, Kalimantan area is supported fully by three agents from Jakarta (i.e. JKT001, JKT003, JKT014). Thus, this condition increase the degree of centrality scores for the three agents.
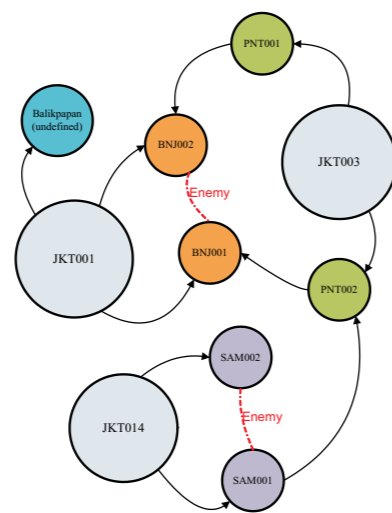

Figure 6. Socio-distribution Networks, Kalimantan

Figure 7 corresponds to socio-distribution network in West Java. Similar to Kalimantan, all magazine products are supllied from Jakarta, in this case, by JKT018. One interesting fact that agent BDG001 is a subordinate of JKT018. It means that while BDG001 is considered as an agent by publishers, he is actually a subagent of JKT018, as described by red line. By further exploration, it is found that agent JKT018 is a preparing BDG001 to be a major agent in Bandung. Another interesting fact is that two agents in Bogor (i.e. BGR001, BGR002) and one agent in Bandung (BDG002) are supplied by JKT018 because they possess the same ethnic and origin from the same village. Since agent JKT018 is a Sundanese, it is assumed that those three agents are also Sundanese.
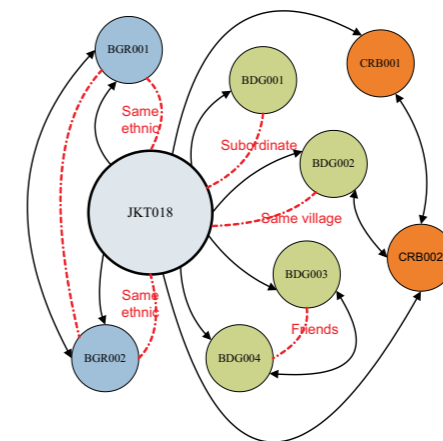

Figure 7. Socio-distribution Networks, West Java

Figure 8 represents the socio-distributon network in Central Java and Yogyakarta. There is no certain 'click' in these areas. All supplies come from Jakarta by JKT014 and JKT003. When further asked to JKT014 and JKT003, why there is no major agent in these areas, they both provided the same reason. Publishers hesitate to create direct distribution channel to agents in these areas because the agents seem to work individually. In other words, there is very limited colaboration among agents in Central Java and Yogyakarta. This finding is suported by the condition that social relationships among agents are considered low. For example, from the interview, it is found that agent YGY001 considers agent YGY005 as an enemy, because YGY005 tend to sabotage his retailers by giving higher discount rate to them. In similar, agent YGY005 provided the same reason regarding his relationship with YGY001.
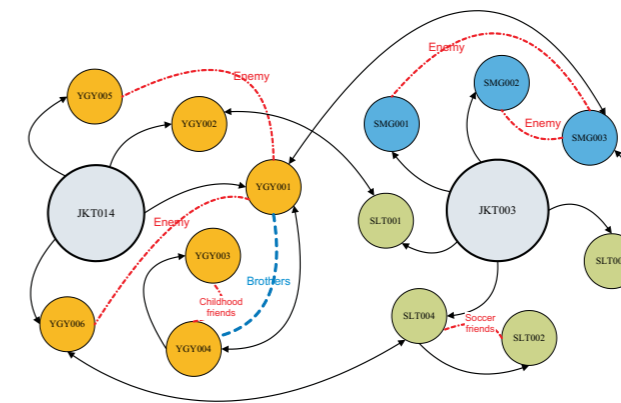

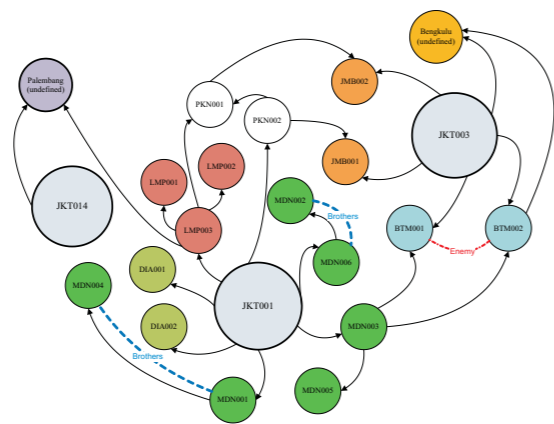Figure 8. Socio-distribution Networks, Central Java-Yogyakarta

Figure 9. Socio-distribution Networks, Sumatera

Figure 9 describes the socio-distribution network in Sumatera. There is no certain 'click' found in the network. In fact, agents from Jakarta act as the main suppliers in Sumatera. In other words, by providing magazine products to three agents from Jakarta (i.e. JKT014, JKT003, JKT001), the Sumatera market will be covered.

7.3. Confirmation

A key agent in Indonesian Magazine business is an agent who must possess certain qualifications, as follow (source: interview to informants).

1. Has at least 16 sub agents in any area in Indonesia, except Maluku and Papua, whereas each subagent will act as subdistributor to at least 40 retailers.
2. Has at least 15 years experience as a magazine agent with no bad debt records.
3. Has at least 30 brands distributed.

From the SNA, there are four agents in Jakarta, one agent in Surabaya, and one agent in Makassar, who have the capability to play as key distributors to cover Indonesian magazine market. This findings were confirmed by conducting further interviews to the identified "clicks". All the "clicks" confirmed the findings by providing the following information:

Table 5. Data of the identified "clicks"

No.	Agent Code	Number of Subagents	Established	Number of brands distributed	Average revenues per month
1	JKT001	56	1972	62	Rp. 1.8 billion
2	JKT003	51	1978	61	Rp. 1.4 billion
3	JKT014	55	1987	67	Rp. 1.2 billion
4	JKT018	71	1967	65	Rp. 2.1 billion
5	SBY007	42	1991	55	Rp. 1.0 billion
6	MKS002	34	1990	51	Rp. 980 million

Source: interview to six key agents

Moreover, agent JKT018 stated that he is also the key agent who has the access to distribute to the modern markets (i.e., hypermarkets, bookstores, and hotels). In term of social networks, the main activity is knowledge distribution between the members in the networks. Mostly, knowledge distribution among agents comprised of: product knowledge, payment system, agreement "not to pay" the publisher, and knowledge about the publishers background.

From the publishers side, five informants (i.e. distribution managers from five publishing companies) were asked to use the key agents as the new basis to estimate new distribution cost. The results of comparing current and estimate PODC (Cost of Distribution as a Percentage of Overall Cost) can be seen in table 6.

Table 6. Comparison of PODC

Publisher Code	PODC		Cost reduction
	Using current agents	Using key agents	
LMY010	65,70%	33,20%	32,50%
JPS004	69,20%	28,50%	40,70%
NMB025	65,70%	31,60%	34,10%
EMJ006	65,00%	33,09%	31,91%
FGJ001	67,00%	26,00%	41,00%

Source: interview

Interestingly, the reduction of number of agents does not reduce the distribution cost proportionally, considering 'returning cost' and 'collecting cost' are determined also by distribution method, instead of by number of agents solely, whereas 'carrying cost' is influenced mainly by the number of agents delivered. In fact, by using six key agents identified by SNA, publishers estimate that they should be able to save distribution cost by 31%-41%.

8. Conclusion and Future Research

Based on the study, there are four key agents in Jakarta, one key agent in Surabaya, and one key agent in Makasar, who have the capability to play as key distributors to cover Indonesian magazine market. These agents play as "clicks" to the social networks, as well as the distribution networks. All of the clicks confirmed the findings, that the six of them will be able to cover the Indonesian market. Moreover, by using six key agents, distribution cost can be reduced by 31%-41%. In other words, by utilizing six agents, publishers can penetrate the Indonesian markets with less effort and less cost.

Two possible development of this study might be carried out. First, to explore the magazine penetration speed when any publisher only utilizes six agents as distribution channels. Second, to explore the 'knowledge sharing process' among agents regarding product knowledge, payment system, agreement not to pay, and knowledge about the publishers background.

9. Contribution

This study is expected to contribute to the sustainability of magazine publishing business in several ways. First, publishers are able to evaluate their distribution channels, by focusing only to key distribution channels (i.e., key agents). By doing this, publishers should be able to reduce their distribution cost, especially the carrying cost, as well as reducing the return rate of the products. Second, by conducting social network analysis, publishers will have more systematic view of the current condition in the distribution networks. Specifically, "bad" agents can be identified and excluded from the channels. By doing this, publishers will have lower rate of "bad-debt" ratio.

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