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Inter-firm collaboration in Australian Telecom market

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Abstract

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Inter-firm Collaboration in the Australian Telecom Market

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The Australian telecommunications market is a typical mature market in a developed country. This paper gives an overview of the Australian telecommunication market's development, industry structure, major components and contributions, major firms, key government agencies and organizations in this market. The history and development process of the Australian telecommunications market is, like most telecom markets in the world, one from monopoly to limited competition, from state ownership to market driven and from closed to open. To study inter-firm collaboration types, benefits, and barriers, a qualitative interview was conducted to collect real industry data from different sectors. Face-to-face interviews were adopted in this research. Firms from all sectors, different sized firms, firms from different nations were selected for the interview. The results provide better solutions to support and encourage inter-firm collaboration for telecom enterprises.

1 Introduction

The telecommunications industry makes a substantial contribution to the Australian economy. The mobile telecommunications industry is one of the fastest growing telecommunications markets in Australia. The current industry structure involves a number of sectors: hardware providers, service providers (including carrier service providers, internet service providers, and mobile service providers), content providers (including content aggregators, content producers, and technical providers) and sales (including mobile phone retailers, card retailers, and end-user service providers). More than eight million mobile phone handsets were sold in 2005 in Australia, highlighting the continued growth of the industry (AMTA, 2007). In 2006-07, the mobile telecommunications industry continued its robust growth and contribution to Australian economic growth.

In 2005-06, there were 19.9 million mobile subscribers in Australia, implying a penetration rate of almost 97% (ACMA, 2007). During the financial year 2006-07 the total number of mobile phone subscribers reached 21.1 million, implying a penetration rate of over 100 per cent (Access Economics, 2008).

Table 1 Industry revenue and value added, AUD, 2002-03 to 2006-07

|	2002-03	2003-04	2004-05	2005-06	2006-07
Industry revenue	11,757.8	12,267.7	13,381.2	13,676.7	14,500.1
Industry value added	5,751.6	5,952.4	6,266.8	6,218.9	6,470.3
Earnings to capital	*4,288.1*	*4,440.1*	*4,661.6*	*4,687.8*	*4,634.0*
Earnings to employees	*1,463.5*	*1,512.3*	*1,605.3*	*1,531.0*	*1,836.3*
Employment	21,405	22,216	23,685	22,923	22,386

Source: Access Economics (2008), Australian Mobile Telecommunication Industry, p.19

As shown in Table 1, in 2006-07 the mobile industry employed over 22,000 workers and paid AUD1.8 billion in wages. Industry gross value added was AUD6.5 billion, accounting for 0.62 per cent of Gross Domestic Product (GDP). The mobile telecommunications industry accounted for 25.6% of the total telecommunications' contribution to GDP in 2006-07.

2. Industry Structure

Competition in the Australian telecommunications industry is high amongst established firms, both in terms of price and service. Re-sellers are limited in their ability to compete on the basis of price as the price at which they are able to procure network services is determined by the four major carriers. There is also some scope for those firms which offer other telecommunications to provide price advantages through bundling, including Telstra and Optus, as well as some resellers such as AAPT (Access Economics, 2007).

Figure 1: Australian mobile market
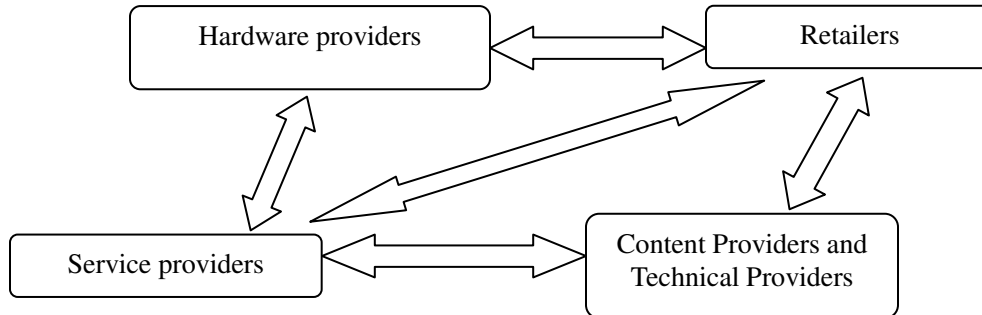
As shown in Figure 1, the structure of the Australian mobile market consists of four major components: hardware producers (including network infrastructure producers and mobile handset producers), service providers (SP) (including carrier service providers, mobile service providers, internet service providers, resellers, and mobile virtual operators), retailers (including mobile handset sales and card sales), and content providers (including content providers, content aggregators, developers, and technical providers). Each of these components is discussed in more detail below.

2.1 Hardware sector

There are two distinct elements in the mobile telecommunications hardware sector: infrastructure that supports the volume of mobile telecommunications services and the end-users' hardware which is owned and operated by individuals to use mobile telecommunications services (AMTA, 2007). It requires the use of a substantial amount of infrastructure to make or receive a call on a mobile phone. The infrastructure component of the hardware sector includes: base stations, switching equipment, antennas, and towers. In Australia the major providers of infrastructure hardware products are Ericsson, Nortel and Nokia (AMTA, 2007). The end-user component of the hardware sector includes the equipment owned and operated by individuals to provide access to mobile telecommunications services. This includes handsets, motor vehicle hands-free kits, earpieces and mobile phone cases. In Australia the majority of end-user hardware products are imported and supplied by Nokia, Sony, Ericsson, Panasonic, Siemens, Samsung, Motorola and many other smaller enterprises (AMTA, 2007).

2.2 Carriage Service Providers

Carriage Service Providers (CSPs) are defined as suppliers of telecommunications services to the public using carrier network infrastructure. The mobile network carriers are the largest individual sector in the mobile telecommunications industry. In 2002, there

were 13 CSPs operating in Australia. This included four mobile network carriers Telstra, Optus, Vodafone and Hutchison who operate their own mobile networks and nine resellers (e.g. AAPT, Austar, B, Boost and Primus). Virtual Mobile Network Operators (VMNOs) are also regarded as CSPs and offer mobile services to customers using a third party's network (ACMA, 2007).

2.3 Retailers

Retailers offer mobile services to end-users on behalf of CSPs. Customers can purchase mobile telecommunications hardware and services from retail outlets including convenience stores, petrol stations, supermarkets, Australia Post etc. Most CSPs have their own retail shops where customers can purchase the hardware they require to access mobile services and to enter into arrangements to use the network hardware infrastructure. The exclusive retail outlets of mobile network carriers are: Hutchison - '3' Shops; Telstra - Telstra Shops; Optus - Optus World; and Vodafone - Vodafone (AMTA, 2007).

2.4 Content Providers and Technical Providers

Content providers deliver information and entertainment content. Mobile premium content can include: sports scores; music clips; sports highlights; mobile wallpaper; games capable of being played on mobile telephones and other downloads; age-restricted content; chat services; news; financial data; weather information; horoscopes; and mobile ring tones (Span, 2007). The advent of 3G mobile services has increased the importance of the role played by content service providers (Access Economics, 2007). The mobile content market generated AUD129m in 2004. The personalized market, including ring tones and wallpapers, altogether accounted for 69% of the content revenues (Access Economics, 2007).

3 Methodology

A qualitative case study was conducted in Australia to examine the appropriateness of the theoretical framework used in this study on telecommunication inter-firm collaboration. During this case study, face to face interviews were employed. A questionnaire was used to collect data on inter-firm collaborations in the Australian telecom market.

As a result, 8 interviews, 7 questionnaires, and 8 inter-firm collaboration cases were finished from Jan 8th, 2009 to Jan 29th, 2009. The case studies include most sectors in the telecommunications market: device providers (mobile handset providers, base station and network device providers), operators or CSP (carrier service providers), SP (service providers), ISP (internet service providers), retailer, and TP (technical providers). The interviews included 2 DP, 3 SP (including CSP, SP, ISP), 2 CP (including CP, developers, and TP), and 1 retailer. However, the sector question in the questionnaire is a multiple-choice question. For example, one company can be 70 per cent device provider and 30 per cent service provider. In this study, all of the interviewed firms are from the

private sector. After the opening policy in July 1997, most Australian telecom firms are private. In November 1997, Telstra became partially privatized. In August 2006, the Australian government sold most of its remaining Telstra stake and parked the rest of the shares (32 per cent) in a Future Fund.

4 Results and analysis

4.1 Size of Australian firms

In Australia, firm size is usually measured by the number of employees. The definition for small and micro enterprises is below 20 employees. The definition for medium enterprises is between 20 and 199 employees (for the telecommunication and services industry). And the definition for large enterprises is 200 or more employees (Harvie and Lee, 2003). In this research, 14.3 per cent of the interviewed firms are micro/small-sized enterprises (had less than 5 employees), 28.6 per cent of firms are medium sized enterprises (had 20 to 99 employees), and the other 57.1 per cent firms are large enterprises (had more than 200 employees).

4.2 Size still matters

The outcome of the study strongly supports the position that size still matters when firms select their collaborators. 38% of the interviewed firms chose larger-sized firms as their top collaborator, 62% firms choose peer-sized firms as their top collaborator, and no firm choose smaller-sized firms as their top collaborators. Firms usually choose peer-sized or larger-sized firms as their top collaborators to keep their position, market share, and competitiveness. This is not related to the size or sector of the interviewed firms.

4.3 Culture difference

Another result from the data analysis is that Australian telecom firms prefer to cooperate with firms from U.S.A, Europe, and New Zealand. In this study, 87.5 per cent of the collaborating cases are between the U.S.A, Europe, and New Zealand. A reasonable explanation for this is transactions cost and culture similarities. Australian firms prefer choosing collaborators inside Australia because of the higher transport, communication, and transfer cost with firms from other countries. On the other hand, Australia has a similar culture and background to that of Europe, New Zealand, and North America. When it comes to international business, firms in these areas find it easier to collaborate with each other. Different cultures or language may increase transaction cost and risks arising from misunderstandings, extra cost of communication, and different behavior.

4.4 Types of collaboration

Management and service agreement (37.5%) co-production service (25%), and know-how licensing (25%) have tended to dominate the types of collaboration in the

Australian telecom market, alongside joint R&D service, joint venture service, technical training and start-up assistant service, production, assembly, buy-back agreement and market share. The results show that franchising is not a collaboration type in the telecommunications market. Two new types of collaboration are raised. The first one is providing a test device to make sure new products work (cooperate on product test), which is a common collaboration type in the telecommunications market. The second one is pre-sale service. Pre-sale service includes all services provided before sales to increase real sales amount, or example, consulting, customer relationship building, market and customers' requirement analysis. The results from this study show that these collaboration types in the Australian market are now wide spread.

The results from this study also support the view that firms prefer deep and long-term collaboration in the telecommunications market. "We need to create an environment of trust between partners though long term alignment of goals (Interviewee)." Most managers believe that trust plays a very important role in inter-firm collaboration. However, they also agreed that trust can only be built and tested over time. Long-term collaboration can reduce transaction costs, strengthen trust between the collaborating firms and reduce risks associated with collaboration.

4.5 Barriers towards domestic and international collaboration

The first barrier chosen by 71.4% of firms in the Australian telecommunications market is benefit distribution. The second barrier chosen by 42.9% of firms is a lack of trust. Technology complexity, societal-level dynamics, and previous collaboration history was selected separately by 14.3% of the interviewed firms. Benefit distribution and lack of trust problems are still the top barriers for inter-firm collaboration in Australia. However, most Australian firms think there are no barriers towards international collaboration. Only 2 firms selected lack of trust and language/culture barriers as their international inter-firm collaboration barriers. However, they indicated that these barriers are not a problem in most countries. Australian firms are more confident in conducting international business because of its multi-cultural and immigrant background.

4.6 Key for successful collaboration

"Benefit or value perceived as mutually beneficial is very important in collaborations (Interviewee)." "It is important the collaboration can help to increase revenue or our customer base (Interviewee)."

Most interviewees put profits/revenue that collaborations can bring as the most important determinant for a successful collaboration. However, trust is also very important to interviewees. "It is important to create an environment of trust between partners through long term alignment of goals (Interviewee)." "The key points for inter-firm collaboration are trust, open discussion and forming a good relationship (Interviewee)."

One interviewee pointed out that the contact person in a collaboration is vital to the success of inter-firm collaboration. "People sometimes select collaborators because of the contact person rather than how good your product is (Interviewee)." Other managers also agreed that the contact person sometimes is vital to a successful collaboration. The results show that benefit and trust are still the most important concerns for a successful collaboration between firms.

4.7 Role of government

Most firms suggest that the government should assist in helping to form inter-firm collaborations by: providing a better environment; building a better (next generation) network infrastructure; and adopting international standards in network provision. Some also pointed out that the government needs to enhance the skill base of the workforce, including that of encouraging more skilled migrants, to facilitate new technology development and inter-firm collaboration. "If the government could open more on international labour mobility and skilled employee's immigrating, it will help on the further development of our company (Interviewee)." The limitation on skilled labor mobility increased the costs and risks. On the other hand, the skilled managers with international trade and collaboration experience or business networks in another market are likely to increase the performance and successful rate of inter-firm collaboration. All of the firms have high expectations of government policies to support their business development and inter-firm collaboration. They believe that government policies and support (direct subsidiaries, increasing labor mobility, increasing openness, or getting connected with the international standards) will help improve the telecommunications market environment and the development of individual firms.

5 Conclusions

The Australian mobile telecommunications industry comprises the hardware sector, service providers, retailers, and content providers. Telstra, Optus, Vodafone and Hutchison, which together occupied nearly 99.7% of total Australian market in 2007 (Access Economics, 2008). However, the Australian market is open to foreign competitors. Most of the Australian telecom firms are private firms.

Size still matters when firms select their business collaborators (This research result is presenting in another paper "Size still matters when firms choose business collaborators). Location and culture similarity are also important concerns when firms seek international collaborators. Firms prefer deep and long-term relationships when collaborating, which reduces both costs and risks. Australian firms have fewer barriers with international collaborations. Although the Australian government has less influence and control over the telecommunications market, Australian telecom firms have higher expectations and trust of government policies and support for their business development and inter-firm collaboration.

Most interviewed firms in Australia emphasized that trust and benefits are vital to a successful inter-firm collaboration. This result is also consistent with the research results of the Chinese telecom industry (Zhang, Hodgkinson and Harvie, 2009). The latest quantitative research results show that both communication and trust play significant role in inter-firm collaboration in both Australia and China. However, trust in influenced by different factors in different countries.

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