Content and Advertising: TV Media Competition in a Mixed-duopoly Market

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Abstract. This paper investigates the advertising intensity and channel content in a mixed-duopoly market. We find that there is less content difference in a mixed-duopoly market than in a private-duopoly market. The private channel is worse off when it competes against a state channel since the private channel faces more intense competition in content and viewing price. We also extend our analysis to social welfare investigation and policy implications. We show that the mixed-duopoly market is socially preferred to the private-duopoly market. It is also found that government intervention by using state channel only cannot reach social optimum.

JEL classification: D43, L13, L33, L82
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1. Introduction

The world has entered the digital TV era. Developed countries as well as developing countries have either completed or announced their transition from analogue TV to digital TV. For example, UK television broadcasters started to transmit digital signal in 2007 and will finish the switch-off by the end of 2011; in Canada the government has ruled that television stations would be forced to switch to ATSC digital broadcasting by August 2011; in the United States all full-power television will be digital by no later than February 2009, and analogue transmissions will be terminated; in China the switch-off is scheduled to be in 2015. The digital technological change is going to have critical and wide-ranging impacts on television broadcasting. In fact, with the adoption of digital encryption, TV channels may charge viewers directly, in addition to obtaining the funding from advertisers. Furthermore, the digital technology significantly increases the number of channels, due to the relaxing of spectrum constraints.

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A large number of economic articles have argued that traditional broadcasting systems based on analogue transmission cannot bring the most efficient resource allocation to viewers, because of commercial media appealing to mass market and neglecting niche viewers.[2] State broadcasters are willing to serve these markets as they have social benefits but are not covered by private broadcasters due to perceived lack of profitability, because state broadcasters have different aims from private broadcasters.[3] Indeed, many countries have been using state broadcaster to improve efficiency in their national TV broadcasting markets, such as BBC in the UK, ABC in Australia, NHK in Japan, etc. Broadcasting markets all over the world are characterized by the coexistence of private channels and state channels. This is not a distinctive characteristic of TV media markets in developed countries; it also characterizes developing countries such as China and Middle-Eastern nations. According to Prat and Stromberg (2005), in the average Western European country about 50 percent of the five television channels with the largest audience are state-owned. This proportion increases to 70 percent in East Asia, 85 percent in Africa, and 94 percent in the Middle East. Since the nature of television broadcasting changes with the introduction of digital technology, it is important to re-investigate the competition between private television and state television.

In recent years, many debates have surrounded TV media competition in the digital world. One of the main concerns is what is the challenge to market competition and regulation in the TV broadcasting industry with the innovation of digital technology? Recent papers, such as Gabszewicz et al. (2004), Gal-Or and Dukes (2003), Anderson and Coate (2005), and Peitz and Valletti (2008) have used a Hotelling model to study two private media operators competing in both programming and advertising levels in a two-sided market. Armstrong and Weeds (2007a) analyze channel program quality competition by adopting a two-sided market model to study the program quality competition in both pay-TV and advertising-funded TV markets. However, these papers focus on the competition between private TV channels, where mixed-duopoly competition in the TV media market has not been investigated sufficiently. As mixed oligopoly is still the dominant market structure in the TV media industry, from a theoretical standpoint as well as policy standpoint, it makes sense to study TV channel competition based on a mixed-duopoly market. Furthermore, we expect that many of the conclusions from models of private markets do not carry over to the mixed-duopoly setting.

To my knowledge, mixed-duopoly competition in the TV media market is examined by relatively few papers. Kind et al. (2006) study price competition in the

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[2] Steiner (1952) Beebe (1977) and Spence and Owen (1977) have discussed programme decisions in the traditional analogue TV market.

[3] According to DCMS (2005), the government suggested to expand the BBC's mission with five distinctive purposes: 1) sustaining citizenship and civil society; 2) promoting education and learning; 3) stimulating creativity and cultural excellence; 4) representing the UK, its nations, regions and communities; 5) bring the UK to the world and the world to the UK. For further discussion of public broadcasting see Armstrong and Weeds (2007a).