

The Switchover to Digital Broadcasting in Korea

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Outline of Presentation

- Study background
- Research questions
- Methods
- Findings
- Discussion
- Conclusion

DTV Transition

- The process in which analog television broadcasting is converted to and replaced by digital television. This involves the conversion of analogue terrestrial television to digital terrestrial.

DTV Transition in the World

- Transitions completed
 - About 30 countries (Netherlands, Germany, etc.)
- Transitions in progress
 - About 32 countries (Korea, US, etc.)
- Transitions not yet started
 - More than 40 countries (Cuba, Vietnam, etc.)

Prospectus

- Expected to usher in a new era of broadcasting.
- Provides not only high-quality broadcast programming, but also a variety of information services.
- The DTV transition provides an opportunity for the country to open a more affordable broadband channel to homes and businesses.

However

- Rough roads ahead of the transition.
- The cases of Europe and the U.S. portray a bleak outlook because in these areas the digital transition has suffered various setbacks in terms of technology, policy, business, marketing, and users.

Gap & Barrier

- The issues of technology, policy, business, and marketing are not as complicated as the issue of DTV viewers because of the cultural issues involved in the adoption of DTV.
- The technological transition to DTV is far easier than the socio-economic-political transition.
- The process must be understood as a society-wide phenomenon with an effect on the citizens, public administration, services and industry, policy makers and industries use different approaches to facilitate a successful digital transition.

Case Study: Korea

- The goals, processes, implications, and projected outcomes of certain policies in order to gain insights into the digital transition in Korea.
- By investigating these issues through a socio-technical framework, it establishes a strategy for DTV that incorporates proper regulations, industry dynamics, and market receptiveness to address issues such as the introduction of in Korea and the regulatory issues that may arise.

Previous Studies

- Use a conceptual/theoretical framework such as political economy (Xing, Hanhui, & Chong, 2009; Feng et al., 2009; Weber, 2005; Schaeffer & Atkin, 1991).
- Most studies are either qualitative or quantitative in nature, and only a few studies use a combination of theoretical and empirical approaches (Xing et al., 2009).
- Comprehensive and integrated framework is needed. Given this complex nature, it further investigates the various relations between the technological and social impacts of DTV.

Why Korea?

- Korean DTV offers an excellent example of such dynamic interplays.
- Korea has pioneered the development of digital technologies and is the first country in the world to offer commercial digital multimedia broadcasting services.
- Korea can be the best test-bed for digital projects and future case studies on the diffusion and adoption of emerging technologies.
- Korea has a well-established infrastructure and dynamics that support digital development, including rapid diffusion and a high penetration rate.

Korean DTV Switchover

Time	Events
2001–2002	First DTV channels started broadcasting in 2001 and 1.1 million DTV sets were sold in 2002
May 2004	Start of debates between ATSC and DVB . Sought comment on related proposals
September 2005	The Committee for Digital Broadcasting Development was formed Hearing on Digital Television
July 2006	The Commission for Promoting Digital Broadcasting was established
August 2006	The DTV standard was selected as ATSC
May 2007	The Digital Switchover Trial Service Promotion Council was launched
October 2007	A draft of the plan for digital switchover trial service was issued
March 2008	KCC was launched . KCC initiated first official review of DTV transition
November 2008	DTV Korea was established. Extensive Nationwide Initiative for DTV Outreach.
April 2009	A final plan for digital switchover was determined by the KCC
July 2009	Congressional Passage of DTV Transition Legislation
October 2009	The National Assembly passed a special act to end analog TV broadcasting in 2012
August 2009	A trial service plan was established and is set to begin in September 2011 .
December 2009	A pilot program was established .
December 2009	Uljin was selected as a test-bed for digital broadcasting
December 31, 2012	Analog broadcasting switchoff
January 1, 2013	Full-scale digital broadcasting begins

Stakeholders

- Supply side: Policy (government), content (terrestrial broadcasters), manufacturers (electronics and equipment), and transport/processing (cable/satellite).
- Demand side: Consumers, viewers, and the market.

Conflicting Interests

- Different stakeholders have different capabilities, demands, interests, and positions, and thus play different roles in the process.
- The key to the digital transition is efficient communication and coordination among the stakeholders.

- The KCC
- Broadcasters
 - KBS, SBS, EBS, MBC, &11 local TV stations
- Cable operators
- Electronic industry
- Consumers

Political and Regulatory Issues

- Issue 1: What standard to use
- Issue 2: When to terminate analogue broadcasting
- Issue 3: How to raise funds for the digital switchover
- Issue 4: How to enhance the free broadcast reception environment
- Issue 5: How to effectively utilize the spectrum

Challenges and Drivers

- More difficult than most people imagined.
- More adverse effects of the transition: dynamic interactions, including technology, service, market, regulation, and consumers/viewers.
- Technologies have been developed relatively smoothly, whereas other aspects of markets, consumers, and regulations lag behind.
- Has been pursued with an emphasis on technology in the market, leaving the social issues underdeveloped.

Push and Pull

- Although the Korean government has high hopes that investment in the digital switchover will provide a further impetus to the country's economic growth, demand from the market and consumers has not been compelling enough to meet these expectations.

Difficulties

- Consumers in general are not well aware of DTV and its transition.
- Top-down and pro-competitive industry approach
- Despite several initiatives, there is currently no overarching national policy on the transition to DTV.
- The market and consumer aspects, in particular, have been neglected in the digital transition.

-Differing views and plans among legislatures

-High competition
-Tech-driven development

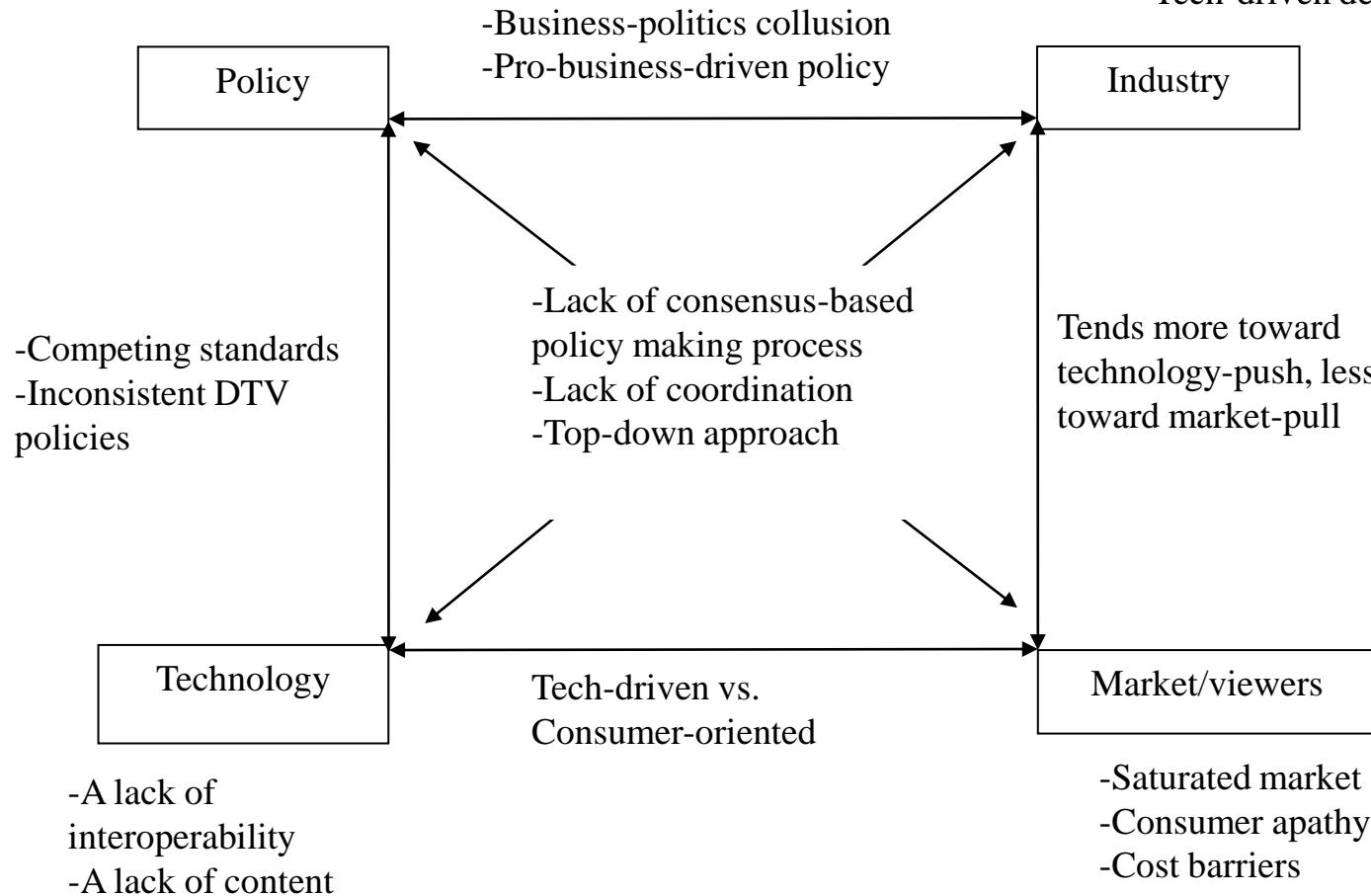


Figure 1. Challenges of DTV transition

Implications

- Digital switchover requires close cooperation and understanding among stakeholders, including the government, broadcasters, consumer electronics manufacturers, civic groups, and consumers.
 - Socially: involves numerous organizations, structures, legal entities, industries, and consumer groups.
 - Technologically: digital broadcasting accelerates cognate technologies of infrastructure, applications, and services evolving toward the next generation of digital technology.
 - Socio-technically: defies the current regulatory structure, destructs the current markets, and gradually introduces new structures to the market, industry, and regulation.

Lessons

- Development of digital broadcasting comprises multiple stages, predicated by several significant events, including the deployment of digital infrastructure, the resolution of content issues, the stabilization of standards, and the introduction of new regulatory frameworks.
- It is critical for players to establish the proper technological evolutionary path and to forge relationships with the right services, applications, and content players.
- DTV may not be successful as a stand-alone technical artifact/product or autonomous entity. It will be viable as part of a bundle of different services.

Conclusions

- The process of transition to digital broadcasting must be understood as a society-wide phenomenon with an effect on the citizens, public administration, services and industry, policy makers and industries use different approaches to facilitate a successful digital transition.
- The successful DTV development and transition will require a holistic approach and cannot be considered only in the context of technological advancement or innovative products.

Future Studies

- Calls for further research that traces the actual diffusion of DTV with a focus on the conceptual discrepancies among the stakeholders identified in this study.