China’s Digital Switchover: International Context

ABSTRACT
This short article introduces the subject of digital switchover in China to readers from other countries, providing some context and highlighting some of the distinctive characteristics of the Chinese transition, to complement the two following articles, submitted as a pair, by academics from the Communication University of China.

China will not be among the first group of countries to complete digital television switchover but it will certainly be the biggest. As such, it faces some formidable challenges. Many of these are similar to the issues facing others: selecting technical standards; developing new digital content to attract consumers; regulating relationships between platforms; ensuring collaboration between industry players; and providing a mix of commercial and public investment. Designing the interplay between public policy and the market is central to digital switchover in every country.

However, in three respects, China’s situation and experience is very distinctive:

• The structure of its broadcasting sector

KEYWORDS
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• The approach to digital terrestrial television
• The role of state funding

A brief account of each may help position China’s digital switchover within the framework of international comparative study.

CHINA’S BROADCASTING SECTOR
China has over 2500 television channels, serving around 380 million TV households. Central China Television (CCTV) is the dominant force at national level with a dozen channels. Then every province and autonomous region mounts its own broadcasts, including one satellite channel available for distribution across the whole country. In addition, cities have their own local TV channels and county stations act as relays. However, these broadcasting organisations are all state-owned and, like programme production companies, come under the supervision of the State Administration of Radio, Film and Television (SARFT).

In China’s distinctive hybrid economy, the market – primarily through advertising – provides nearly all their funding. Zhao Yuezhi and Guo Zhenzhi observed that

The Chinese television industry is characterised by a unique form of state monopoly capitalism: commercialised operations organised into a hierarchical structure of administrative monopoly.

(Wasko 2005)

Satellite technology is extensively used for distributing services to cable head-ends and terrestrial transmitters, but direct-to-home satellite reception (DTH) in the past has been restricted. When DTH services began to be beamed into China from abroad, China’s response in 1993 was to introduce regulations banning the ownership of DTH reception satellite dishes without a special licence. Licences were, in practice, largely restricted to hotels and foreign compounds, though, in rural areas without an alternative way of receiving Chinese domestic services, the regulation was not seriously enforced.

Cable reception of satellite services, however, provides a filter between the broadcaster and the viewer through which control over foreign transmissions can be exercised. Cable TV has blossomed in China and is now the norm in most Chinese cities, accounting for around 140 million households.

Western commentators on China’s state-managed broadcasting often focus on information restriction. However, China has a desire to increase, while also to control, the dissemination of information – in the interests of creating and guiding a ‘harmonious society’. The Communist Party leadership appreciates that a policy of withholding information from China’s huge population of increasingly well-educated citizens could never work, yet it has set its face against the conflict and discord which it associates with an open market in information and opinion. So the aim is to manage the public communication process – and Chinese officials and academics talk about a policy of ‘informationization’. The desire to provide every household with a managed modern information platform is one of the drivers behind China’s policy of digital switchover.
China has long been the world’s largest manufacturer of TV sets; since it joined the World Trade Organization, its very competitively priced consumer electronic goods have played a major role in its export boom. The global switch to digital transmission is now transforming this business. The world market for digital receivers (TV sets and set-top boxes) is growing rapidly in the advanced economies of the world, where analogue TV sets are becoming obsolete. Digital switchover represents a beckoning export opportunity, especially as countries that are making digital switchover mandatory are keen to keep down the compulsory cost to their consumers and look to China as a prime source of low-cost mass production.

The spread of cable and satellite technology notwithstanding, integrated digital TV sets are normally based around a digital terrestrial tuner. China started digital terrestrial television trials back in the 1990s and took a decision then to develop a specifically Chinese set of digital terrestrial technical standards. The motive for doing so was primarily commercial (as in the USA, Europe and Japan which all have separate standards). As well as deterring rivals from seeking to enter China’s enormous TV receiver market, having distinctive Chinese standards reduces the need to buy intellectual property from foreign companies. As in other sectors, China’s aim is to develop its own competencies in high-tech industries.

The Chinese standard for digital terrestrial television is known as DMB-T (Digital Media Broadcasting Terrestrial), but in practice it incorporates two different, currently incompatible, systems developed respectively by Qinghua University in Beijing and Jiaotong University in Shanghai. The technical difference between them is not trivial and issues surrounding this academic – and political – competition slowed commercial development. Receiver manufacturers have now produced set-top boxes that can handle both variants, allowing broadcasters to choose.

Formulating and funding a policy for the digitization of China’s thousands of analogue terrestrial transmitters has taken several years. Digital terrestrial television was piloted during the 2008 Olympics, with high definition (HDTV) as an ingredient, but no digital terrestrial receivers were yet on sale in the shops.

The position is very different in Hong Kong. There, for historical reasons, terrestrial television is more important than in the major cities on the mainland, accounting for the majority of the 2.3 million households. Digital terrestrial transmissions began at the end of 2007, with the two main terrestrial broadcasters simulcasting their analogue services and adding new digital-only channels, including HDTV. Coverage of 75% was swiftly achieved. The services were free-to-view: consumers simply had to purchase unsubsidised set-top boxes. Driven by the Olympics, take-up rose from 9% to 20% over the summer of 2008.

The pattern in Hong Kong therefore is similar to European models of digital switchover, with the introduction of digital terrestrial and the simulcasting of analogue services central to a digital switchover transition period. However, any prospect of switching off analogue terrestrial transmissions throughout mainland China – given the size and character of the terrain and the limited consumer spending power of rural households – is distant. Moreover, broadcasting spectrum is not financially valued and priced, and the quest to save analogue terrestrial spectrum, so central to the switchover strategies of other countries, is less of a driving force.
China’s main progress towards digital switchover has so far been in converting its extensive cable systems.

THE ROLE OF STATE FUNDING
As just noted, the limited spending power of rural families – constituting the majority of China’s TV households – is a major constraint on any policy to use private consumer spending as a major driver of digital switchover. For rural households dependent on free-to-view analogue television, as for the areas to which television is being delivered for the first time through a combination of Direct Satellite and local relay technology, the state needs to take on a significant role in funding.

Even within the urban cable areas, the limits of the consumer market have become apparent. Cable households proved reluctant to purchase new digital set-top boxes, partly because the number of services they receive in analogue is already high and partly because of the relative weakness of additional new digital content. The scope for selling high-cost premium subscription services is also limited, primarily because much of the content potentially most attractive for a premium tier, sport and movies, remains part of the basic service. The government has no desire to remove popular sport from Chinese households and the film industry has no system of rights management that would allow feature films to be aired sequentially on premium and basic channels. While there are now plenty of pay-TV channels, take-up is low.

A series of pilots in different cities and provinces tested different service offers and different business models. Some of the most sophisticated interactive services were launched in Hangzhou in Zhejiang province but were judged too expensive to be copied by cities in less wealthy areas. The government analyzed the lessons from the pilots and stimulated some organizational reform to consolidate capital resources, then formulated a national timetable.

The major cities, including all the provincial capitals and all the cities in the east, were given a switchover deadline of 2005. Counties in the east, and the cities and most of the counties in the central region, as well as some cities in the west, were expected to switch by 2008. The target for the remaining counties in the central region and most of the counties in the west was 2010, with 2015 as the date for completion in the remaining counties in the west.

Slippage soon began and the 2005 target was missed (Screen Digest 2007). The government response was to begin making digital switchover compulsory, starting in small cities. Instead of being sold a new service package, consumers were informed that their systems would be modernized, normally with a modest increase in the charge. The basic idea was to install one new digital set-top box per household for free and to control subscription increases strictly, to guard against any significant consumer revolt. Cable companies were offered the regulatory carrot of a subsidy or soft loan and urged to invest, knowing that the alternative could be an end to their quasi-monopoly status.

The resultant ‘full transition’ business model is therefore one in which state policy, state financial support and commercial income are closely intertwined. In Beijing, the government provides a direct subsidy of 100 RMB to the Gehua cable company for every digital set-top box it provides to its customers, but requires the company to hold the basic digital subscription to the same 18 RMB per month that it charged for analogue. Gehua’s sources of new revenue are therefore limited to pay-TV subscriptions and income from a variety of sponsorship, product placement and merchandizing deals. Elsewhere
cable operators receive new revenue from the basic subscription increase but, as in Beijing, need to supplement the basic revenue by selling subscription services, a range of add-on services, new forms of advertising, sponsorship and other commercial deals.

SWITCHOVER TARGET DATE
China’s commitment is to complete the digitization of its cable systems by 2015. The following two articles from the Communication University of China chart the country’s progress to date and identify the outstanding issues it has to address.

REFERENCES

SUGGESTED CITATION

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New Flows in Global TV

By Albert Moran

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