Strategies for digital television: DTT in Italy

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Abstract

Italian broadcasting has long been terrestrial. Its main shortcomings (spectrum chaos, non-enforcement of the law and market concentration) were considered not conducive to a rapid and reliable diffusion of digital terrestrial television (DTT). In 2005, the private free to air duopolist Mediaset entered the pay TV market with an offer on DTT and, within a few years, has affirmed as a fast-growing operator, threatening the established satellite incumbent (Sky). This evidence apparently challenges the received wisdom of the literature and the business practice. With the aim of explaining these peculiar market dynamics, we study the operators’ strategies, controlling for the institutional side and the policy. A few main points stand out. First, the enduring spectrum chaos has not significantly hampered Mediaset, nor was spectrum a binding constraint, thanks to biased regulation. Second, the entrant crafted a coherent and gradual “premium content” strategy, fine-tuning its evolution in accordance with the platform diffusion. Third, the public policy for digital TV served as a supporting complement to the private strategy. In particular, being biased, it favoured the diffusion of DTT over rival platforms, and benefited its main pay-TV offer. Overall, our analysis uncovers a complex and unique national case, rooted in an effective, albeit contentious, public–private interplay. Consequently, the Italian case does not convincingly challenge the received wisdom on DTT.

JEL Classification: L12, L51, L82.

Keywords: broadcasting strategies, DTT policy, pay-TV, Italy

1. Introduction

By mid-2003, the implementation of the Italian switchover plan for terrestrial TV was very late. In fact, uncertainty among broadcasters prevailed, spectrum allocation was highly chaotic and only a few pilot trials for digital terrestrial television (henceforth, DTT) transmission were in place; the official date for the final switch off of the analogue signal, set to 2006, was widely believed as unfeasible. Unexpectedly, within a few months, the two major free-to-air (henceforth FTA)
analogue broadcasters step up (Mediaset\textsuperscript{1}, the private incumbent, and then RAI, the State-owned public service broadcaster – PSB, henceforth), while the Government rapidly modified the normative framework and pushed through the launch of DTT, supporting it with substantial public money.

Nevertheless, despite the strong public push to DTT, for a long period the overall quality and variety of its FTA services (and their actual viewership) resulted to be very poor. Five years after the launch, in 2008, DTT was still registering a marginal audience; consequently, the date for the final switch off of the analogue signal has been repeatedly postponed, first to 2008 and then to 2012.

On the contrary, since the beginning there has been a rapid commercial take-off of pay services, mostly by Mediaset. In January 2005, Mediaset and La7\textsuperscript{2} launched their pay-per-view offers; shortly afterwards, Mediaset teamed up with telecom operators to launch mobile TV services; since 2008, Mediaset’s pay-per-view offer has been upgraded to a richer and expanding pay-TV bouquet, including pre-recorded on-demand services (since 2009).

As a result, within a relatively short period of time, Mediaset managed to enter a new market (pay-TV) with a new platform, and now represents a powerful rival for the satellite pay-TV incumbent Sky Italia (Sky, henceforth)\textsuperscript{3}, whose trend of growth has recently stopped.

This evidence – so far unexplored - is rather puzzling, for several reasons - particularly for the international reader. First, it apparently challenges the diffused belief that DTT is technically\textsuperscript{4} and economically\textsuperscript{5} inferior to other multichannel options, such as satellite and cable; or unfit for

\textsuperscript{1} For the sake of synthesis, in this paper we do not distinguish between internal companies belonging to the same industrial group; in fact, most Italian broadcasters are vertically integrated from content production to technical transmission. Mediaset, for example, controls Eletttronica industriale (transmission towers), RTI (content production and broadcasting), Endemol (content production), Medusa (movies production), etc.

\textsuperscript{2} A fringe FTA broadcaster, owned by the Italian incumbent telecom operator, Telecom Italia.

\textsuperscript{3} It is the fully-owned Italian subsidiary of News Corporation, a diversified media company based in US with operations in different segments and continents.

\textsuperscript{4} First, because of its higher energy consumption. The electromagnetic pollution and the aesthetical impact of DTT transmission towers and antennas are other serious issues, especially in Italy.

\textsuperscript{5} BIPE (2002; p.80) estimates that the yearly transmission cost of a nation-wide channel through satellite is typically 0.5 million €, while with DTT 5 million €. Recent data (2010) focused on Italy estimate the yearly cost of leasing a national DTT channel to be equal to 3.5 million €.
pay-TV services (EBU 2002). Moreover, DTT does not adequately support the future developments of TV (high definition and interactivity), and its appeal for consumers can be questioned, in some markets (Picard, 2005). Further, the typical pay-TV strategy - that focused on premium content - appears riskier on DTT, especially where a national market features an established multichannel incumbent (such as Sky in Italy). In fact, with its limited channels capacity, a “representative” DTT pay operator could not resist the counter programming strategies of satellite or cable.

International comparative evidence provides a number of examples supporting the previous literature hypotheses. DTT’s inability to fit a premium pay business model has shown up since the late-Nineties, with the business failure of ITV Digital in UK and Quiero TV in Spain, and recently with the closedown of minor DTT pay channels across Europe, both in “terrestrial” and non terrestrial countries. As a counter-check, one can also notice that, where it has been patently successful – like in the UK with Freeview - DTT has mainly affirmed as a “mass” FTA platform, being focused on the new channels developed by the public broadcaster, BBC (Iosifidis, 2005).

We perform a sector, business and policy analysis of the Italian case, focusing on the introductory phase of DTT. The proposed methodology, rooted on the literature of media economics and strategic management, aims at evaluating the main ingredients of the Italian pay offer on DTT – particularly those of the dominant FTA broadcaster. The empirical analysis builds on industry, government and company’s data, including evidence on platform diffusion, new channels, revenues and audience ratings.

The first research question is to disentangle the main factors enabling such an unexpected success and rapid catching up with the pay-TV market leader (Sky). In particular, we examine the troublesome technical profile of the transmission platform (section 2), the choices of investment in content and the pricing strategies (section 3.1), the decoder subsidization strategy (section 3.2) and

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6 We use this term to identify those countries where the terrestrial transmission has been the most important platform for TV, since the analogue era.
7 Concerning France, we mention the recent closedown of the pay channels Canal J and AB1. In early 2010, in Portugal Portugal Telecom significantly reduced its project of developing a large pay-TV bouquet, while Airplus TV in Spain is withdrawing its pay bouquet from DTT due to unexpected operational difficulties.
the most recent market trends (3.3). At the same time, we consider the co-evolution of the institutional side and its likely impact on market processes and competition. In fact, a second fundamental research question is to ascertain weather and how much the success of DTT as a pay offer in Italy could depend on the peculiar and noticeable conflict of interests affecting the media policy of the Italian Government.

Section 2 illustrates the analogue legacy and the digital switchover policy, and presents some international comparative evidence. Section 3 focuses on the operators’ strategies and the recent market developments. Section 4 concludes.

2. Broadcasting legacy and policy

2.1 The spectrum chaos

The socio-economic and political relevance of terrestrial TV in EU is mostly grounded on its market incumbency. By 2003, 45.5% of the European households were only watching this platform, either in analogue or digital (see “T-only HH” in table 1); in Italy, its dominance was much higher, being equal to 84.2%. Looking at the reference countries put in table 1, it emerges that Italy continues to be distinguished by a few traits, which can be associated to the dominance of the terrestrial platform and the high concentration of the TV sector\(^8\). In particular, Italy has the highest share of advertising expenditures collected by TV, and at the same time the lowest per capita TV advertising intensity (both being correlated to high concentration and market power). Restricting the comparison to France, UK and Spain - countries characterised by similar levels of population, wealth, TV-viewership and diffusion of terrestrial TV - we also notice that the progress of the Italian terrestrial switchover has been slower: by 2007, for example, two thirds of the population

\(^8\) For updated analyses of the Italian TV sector in a comparative perspective, see Nicita et al. (2008) and Zaccone Teodosi et al. (2008). The latter also provides annotated reviews of the literature in the appendixes.
were still relying on analogue terrestrial TV. Moreover, severe reception shortcomings continue to characterize terrestrial audiences – both digital and analogue (see *infra*). Finally, Italy will probably be one of the latest countries (among the reference ones) to achieve the complete (nation-wide) analogue switch off, and to vacate the spectrum (digital dividend) in the interest of other communication services.

**[TABLE 1]**

Most of the current switchover problems go back to the analogue era. In Italy, commercial TV developed through a chaotic and unregulated process, rooted in an opaque normative framework, strong lobbying of broadcasters, chronic non enforcement of the law (particularly, antitrust) and connivance of most political parties (see Gambaro and Silva, 1992; Wagner, 2003; Cammarata, 2009). Initially (mid-Seventies), a myriad of commercial broadcasters proliferation like mushrooms, occupying as many frequencies as possible – mostly without any public authorization (so called “Wild-West of the spectrum”). However, only Fininvest (now financial holding of the Mediaset group) grew as a national operator, managing to control an increasing share of the spectrum and challenging RAI’s State monopoly. As a result, Italian terrestrial broadcasters are vertically integrated, own their transmission facilities and maintain a firm grip on their spectrum, however acquired.

Satellite developed later, since 1996, and mainly as digital pay-TV. On one side, Italian politicians have always been reluctant to support its diffusion, because of its supranational status. On the other, the proprietary and premium strategies played by the satellite pay duopolists – Telepiù and Stream - dampened its diffusion, as sanctioned by their financial losses and eventual merger in 2002, leading to the monopoly of Sky. Cable TV, instead, never developed in Italy, being actively discouraged by politicians.

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9 Spain, after the false start in 2000 and the re-launch in November 2005, quickly completed the analogue switch off in April 2010.
10 Still in 1991, 1376 broadcasting license demands were presented to the Communication Ministry. The current number of active terrestrial broadcasters is believed to approach 600 units.
11 In 1975 law n.103/75 imposed on cable TV a series of bizarre limitations which rendered it economically unviable.
In 1990, a first timid attempt to regulate the sector (law n.223/90) de facto accepted the status quo, with RAI and Mediaset operating three terrestrial channels each\(^\text{12}\). The following norms and their faulty implementation never challenged the status quo, tolerating the concentration of the spectrum and advertising market\(^\text{13}\).

Across the years, the two duopolists accumulated an overwhelming advantage over the fringe rivals, which could not resist their counter programming strategies and economies of scale and scope (stemming from content production, ads collection, transmission and administrative operations)\(^\text{14}\). During the Nineties, the audience distribution (see table 2) confirms the resilience of a de facto symmetric duopoly on the terrestrial platform, with RAI and Mediaset accounting for 90-80% of the total TV audience; in particular, Mediaset is dominant in the advertising market, where it collects more than 55% of revenues. Over the years, this improper duopolistic competition between the PSB and Mediaset has sensibly lowered the differentiation and the quality of the terrestrial offer, yielding frequent episodes of “trash TV” (Zaccone Teodosi et al. 2008; chp.3). The terrestrial duopoly begins to be challenged since mid-2000 by satellite – mostly by its pay-TV incumbent Sky.

[TABLE 2]

2.2 The DTT policy

The DTT launch requires a complex process of planning and spectrum harmonization between two coexisting platforms - analogue and digital. For these reasons, worldwide the digital switchover has been managed by a central impartial authority, and has involved preliminary measures of spectrum re-farming. The Italian situation, due to its enduring analogue chaos, would have requested an even

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\(^{12}\) Fininvest was also controlling three additional terrestrial channels, used to launch the first offer of pay-TV, Telepiù, in 1991.

\(^{13}\) In turn, these norms were frequently sanctioned for unconstitutionality by the sentences of the Italian Constitutional Court, and recently by the European Court of Justice. But they are still in place.

\(^{14}\) On the high relevance of economies of scale and scope in broadcasting and media markets, see Owen and Wildman (1992; chp.5), Albarran (1996; sect.2) and Picard (2002; chp.3). The first two provide empirical applications to the US industry.
stronger emphasis on spectrum management, before proceeding with the launch of DTT: in fact, two previous official spectrum plans, despite being approved in 1992 and 1998, were never implemented.

Once again, the occasion was missed. The laws regulating the digital switchover (law n. 66/2001 and 112/2004) did not mandate any preliminary centralised procedure of spectrum management, but simply introduced an “exceptional” norm (which later became the rule) authorising incumbent broadcasters to trade their frequencies (the so called “private trading”), in order to build their multiplexes and launch DTT. These provisions are highly discriminatory, and have greatly favoured incumbent and dominant operators, as later ascertained by a pending EU Commission infringement procedure.

During the last months of 2003, the Berlusconi Government (2001-2006) suddenly accelerated the parliamentary procedures for passing a new DTT bill. While the approval of the contentious law n. 112/2004 was still pending\(^\text{15}\), within one month (in December 2003) the first multiplexes of Mediaset and then RAI were switched on, to broadcast a few digital channels – mostly simulcasts of their analogue counterparts. During 2004-2005, the Government supported DTT with massive advertising campaigns and public funds, financing the households’ purchase of digital decoders (see infra).

These decisions attracted strong criticisms, both from competitors of Mediaset and the parliamentary opposition, on several grounds. A main argument was that the technical trials were too unripe to enable the commercial launch of DTT, and that the overall DTV policy was instrumental in the interests of the Prime Minister Silvio Berlusconi, whose family controls Mediaset. In particular, Mediaset avoided in extremis the divestiture obligation of one analogue channel (Rete 4), thanks to the mere formal fulfilment of the condition that the first DTT multiplexes had been launched (Matteucci, 2005).

\(^{15}\) After being strongly opposed in Parliament and then rejected by the President of the Republic, the bill was approved only “ex post”, in May 2004, after the DTT launch.
More fundamentally, the norms and measures setting the DTT agenda were flawed, in several respects. First, the private trading did not solve but reinforced the asymmetric spectrum distribution, in favour of Mediaset and RAI (AGCM, 2006a; tab.1). Second, Mediaset and RAI have been left free to occupy a significant amount of redundant frequencies\textsuperscript{16}, while their centralised coordination would have eliminated most transmission interferences and enabled further market entry (ACGM 2004; tab.3.9), as requested – for example - by the solution of the Centro Europa 7 case (see Box 1). Third, the pre-existing analogue chaos and the decentralised reallocation of the spectrum (private trading) amplified interferences and reception problems.

[Box. 1]

As a consequence, various statistics uncovered that a substantial share of the installed stock of digital decoders has lain unused or technically defective: in 2006, this share reached 60.3% of the total (EC, 2007a). In 2010, digital channels still need to change periodically their underlying transmission frequencies or multiplexes - and this requires retuning households’ reception devices; even in the new “all-digital” areas (those having switched off during 2008-9), faulty reception is frequent\textsuperscript{17}.

Finally, so far broadcasters have kept the analogue spectrum vacated (the digital dividend), using it to launch additional channels - often duplicates or similar to the existing ones\textsuperscript{18}. All in all, the on-going business practice and policy proposals let to prefigure a new concentrated spectrum distribution, with RAI and Mediaset potentially operating 5 national multiplexes each. Moreover, the spectrum will continue to be one of the most saturated across EU, being monopolised by digital TV services\textsuperscript{19}.

\textsuperscript{16} This technical term indicates that different frequencies are contemporaneously used to broadcast the same channel in the same geographical area. In other words, the TV tuner detects several repetitions of the same channel.
\textsuperscript{17} Italy is the only EU country which does not release official coverage data for DTT. Broadcasters warn consumers to check first on the DGTVi web site if and what channels can be received in their area, before choosing DTT.
\textsuperscript{18} Such as the “+1” and HD channels (respectively, one-hour shifted or broadcasted in high definition).
\textsuperscript{19} The prospective higher number of multiplexes activated in Italy will hamper the creation of the digital dividend requested by 2015 on behalf of mobile broadband services.
Clearly, our considerations make sense from the normative perspective of a benevolent planner, aimed at ensuring a Pareto-optimal outcome and willing to adopt its own impartial agenda of competition management (Picard and Chon, 2004). Sticking to transmission, for example, spectrum concentration and hoarding, besides being socially inefficient, play a strong deterrence role, blocking rivals’ entry. Moreover, transmission interferences are more frequent and damaging for the network coverage of smaller and local broadcasters - the ones mostly lacking spectrum.

Concerning welfare, in Italy consumers’ interests appear to be the most neglected, before the switch off and probably even after. In fact, the commercial launch of DTT has overlapped with the experimental phase, and this character was even concealed to prospective DTT viewers, initially\(^{20}\). Moreover, the minimum quality standard set by law n. 112/2004 was rather minimalist: a national DTT channel, in fact must ensure the coverage of barely 50% of the population.

3. The private-public interplay

3.1 The content strategies

Another main shortcoming of the Italian DTT was the low attractiveness of the FTA content, initially based on mere digital simulcasts of terrestrial analogue channels or apparently “new” terrestrial channels (mostly available via FTA satellite, Matteucci, 2005). On the contrary, in most EU countries, the bulk of DTT licenses were first and foremost assigned to FTA services\(^{21}\), the licenses included specific service obligations and, as a result, a wider and attractive variety of channels - specifically developed for DTT - was generated.

Until 2009, the Italian situation did not significantly improve. Sticking to the most meaningful comparison - the truly-new generalist\(^{22}\) channels specifically developed for DTT - we

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\(^{20}\) Following the complaints of the consumers associations, the antitrust authority (AGCM) uncovered misleading messages in the official advertising campaigns for DTT. See the AGCM decisions n. 13678/2004 and 14851/2005.

\(^{21}\) In fact, they received priority over pay channels for the allocation of spectrum licenses.

\(^{22}\) These are the market leaders, since they cater for the tastes of wide audiences; on the contrary, thematic channels mostly serve niche audiences.
notice that, while in UK were developed 12 channels, broadcasted from a variety of subjects, in Italy there were just 2 quasi-generalist\textsuperscript{23} entries, both developed by incumbent operators (RAI4, from RAI, and Iris, from Mediaset). Instead, initial ventures of minor broadcasters, such as Facile TV, failed because of insufficient digital audience and unsustainable rivalry\textsuperscript{24} (for the first, see section 3.3 - especially graph 2).

The same holds when we look at the other genres\textsuperscript{25} – including thematic channels. Again, we need to wait for the first regional switch offs of late 2008/beginning of 2009 to see the introduction of truly-new channels: Boing (from Mediaset) and RAI Gulp, for children; RAI Sport più, for sport.

Our thesis is that the poverty of the FTA offer characterising the first quinquennium of DTT operations should be interpreted as an intentional profit-oriented strategy – at least for Mediaset - logically fitting the troublesome and long switchover phase of Italian DTT, marked by shaky reception and a level of audience insufficient to finance, through advertising, a mass-oriented FTA business model. Our thesis is coherent with the findings of the literature on “two sided” markets (Anderson and Gabszewicz, 2006) and “chicken-and-egg” coordination problems (see Gupta et al. 1999, Adda and Ottaviani, 2005). Put more explicitly, the advertising-dominant duopolist anticipated the DTT difficulties and coherently decided to focus its technical and financial resources first on the pay business model, during the transition period\textsuperscript{26}; the pay model, in fact, is more financially compatible with the above technical and audience constraints, being focused on an “intensive” viewership (Chae and Flores, 1998). The strategic fit was further enhanced by the choice of a pay-per-view business model (based on premium football events). This choice, besides being less risky for the broadcaster and more appealing for the prospective viewer\textsuperscript{27}, was also

\textsuperscript{23} These two channels, in fact, are mainly focused on entertainment (fiction, TV serials, and movies).
\textsuperscript{24} Due to the vertical integration of incumbents, independent content producers are marginal in Italy.
\textsuperscript{25} Our analysis has been based on the official listings of national channels complemented by a qualified level of national coverage.
\textsuperscript{26} The transition is phasing out with the gradual completion of the first regional switch offs, starting from October 2008, until 2012.
\textsuperscript{27} On the virtues of the pay-per-view business model in the US TV industry, see Albarran (1996; chp.8).
coherent with the low national coverage of DTT multiplexes: in fact, the main metropolitan areas (hosting important football clubs) were the first to be covered, since 2004. Further, our thesis is confirmed by the timely introduction of the pay-per-view offer on DTT – in January 2005, just one year after the FTA launch\textsuperscript{28}. Finally, additional data on the economic predominance of the pay DTT offer over the FTA one are discussed infra (see table 3).

A corollary of our thesis is that Mediaset should refrain from developing new attractive digital FTA channels until DTT coverage and potential audience have reached congruous levels – a condition unfolding only when a sufficient number of regional switch offs are achieved. In this case, in fact, a potential substitutability (cannibalisation) effect between the new attractive FTA services and the established pay ones would be more than compensated by the advertising revenues accruing from the enlarged FTA audiences. Presumably, the time for the change of strategy is coming. In fact, after having strengthened its pay TV offer, in spring 2010 Mediaset launched a new truly-generalist FTA channel, La5.

Obviously, country-specific institutional factors were crucial to enable this peculiar DTT roll-out focused on pay-TV. In EU, a major obstacle to deploy a competitive multichannel offer via DTT has been the limited quantity of spectrum assigned to pay-TV channels. The same constraint in Italy was not an issue, because Mediaset and La7 have been \textit{de facto} free to decide how to organise their spectrum between FTA and pay services, to rent that of close partners and have enjoyed a permissive interpretation of the existing (generous) antitrust limits\textsuperscript{29}. As a matter of fact, they have been able to broadcast dozens of pay-per-view channels each – a condition that any other international pay DTT operator would dream of. Moreover, spectrum licences in Italy are a real bargain for dominant operators, since the State fee is proportional (and cheap - only 1%) to the turnover of the licensee, and not to the amount of spectrum used (or hoarded).

Since its launch in 2005, the attractiveness of the pay DTT offer has resulted to be high – at

\textsuperscript{28} Pay-TV services in Italy, contrary to other EU countries, do not require a specific DTT license.
\textsuperscript{29} In 2005 the communications authority (AGCOM), contrary to the EU prevalent approach, gave a peculiar interpretation of pay-per-view services/channels. These channels are excluded from the computation of the antitrust threshold.
least for the biggest private broadcaster. In fact, Mediaset adopted the same “premium content” strategy played in most European pay-TV markets where, starting from the mid-Nineties, oligopolistic competition had typically run through fierce battles for bidding for premium broadcasting rights: mostly, leading sport events (Prime League football) and first-release movies.

In particular, overinvestment in exclusive rights to premium content works as a proven strategy to pre-empt the rivals’ presence in pay-TV, because in this market there are rigid demand conditions, indirect network effects between content and platform (Katz and Shapiro, 1994) and strategic complementarities with neighbouring markets (FTA and transmission). Over time, EU and national antitrust authorities have recognised the many drawbacks of these exclusivity clauses (Nicita and Ramello, 2005); coherently, in a number of antitrust cases (like in the BSkyB saga in UK), they have imposed a reduction of their duration and scope.

Thanks to these exclusivity limitations (put originally as a condition to authorise the Sky satellite merger in 2003), Mediaset could find available on the market the relevant premium rights, and then decided to implement a similar pre-emption strategy. In fact, since summer 2004 Mediaset began to sign a series of contracts and private deeds with the most popular Italian football clubs (First and Second Division). The ensuing investigation of the Italian antitrust authority (AGCM, 2006b; sect. 94) ruled that Mediaset’s behaviour constituted abuse of dominant position. In short, the original set of contracts and private deeds was introducing a regime of premium content exclusivity for major sport events on all communication platforms, for a duration potentially extending to the season 2015-16. Moreover, the foreclosure potential of exclusivity was reinforced by the overall market position of Mediaset – vertically integrated and leader in many related markets (production and distribution of films and TV serials, etc).

Eventually, Mediaset negotiated with AGCM a few undertakings (see ibidem, sect. 141), and the enquiry was closed without fines. While in theory the AGCM (2006b)’s decision seems to follow the established practice (reduction of scope and duration of exclusivity), in practice things may be different. By the time the antitrust case was closed, Mediaset had de facto obtained a regime
of DTT exclusivity for almost six years (2004-10), twice the EU established practice. Further, an impact assessment of exclusivity clauses including dynamic and systemic feedbacks would have probably yielded a more severe antitrust decision. In short, we believe that content exclusivity, in combination with spectrum concentration, gave a strong selective advantage to the Mediaset’s bouquet, while discouraged the take-off of other potential rivals (including La7 and emerging IPTV offers). This conjecture is also confirmed by the temporal trend of the subsidised decoders (see infra).

Coherently, Mediaset adopted an aggressive strategy of “price undercutting”, with respect to the market leader: in 2005, the retail prices for the purchase in pay-per-view of a First Division football match were respectively 15€ for Sky and 2-3€ for Mediaset.\(^{30}\)

Since January 2008, the launch of the Mediaset bouquet “Premium Gallery”\(^{31}\), including three channels (Steel, Joi and Mya) featuring premium TV series and movies, marks the passage to a more complete pay-TV model on DTT, oriented to raising the ARPU of the platform via monthly subscriptions. Even in this case, the Mediaset offer continues to be priced at a much lower level, with respect to the comparable offer of Sky.

3.2. The public subsidization of DTT decoders

Beside premium content, another important ingredient of the pay-TV strategies on DTT has been that of stimulating households to buy pay-TV-compliant decoders. This goal in Italy was achieved in a very original and contentious way.

Since the early days of pay-TV, in Europe broadcasters had to promote decoders embedding proprietary (non interoperable) CASs (conditional access systems), to fight piracy. Obviously, proprietary CASs are not conducive to the emergence of horizontal (retail) markets and cheap

\(^{30}\) The less popular football clubs broadcasted by La7 were also priced at 2-3€ per match.

\(^{31}\) This 24-hours offer qualifies as an “extended” pay-TV bundle, since it is available also time-shifted by one hour.
decoders; consequently, most pay-TV broadcasters had to privately subsidize consumers to stimulate subscriptions.

In Italy, the many shortcomings of DTT (limited coverage, faulty reception, unattractive FTA offer) were discouraging the spontaneous purchase of digital decoders. Once again, incumbent stakeholders showed evidence of genius, managing to combine the public support to DTT with their private pay-TV interests. In fact, despite its different and specific focus, the EU policy promoting the open API MHP\textsuperscript{32} served as the main formal justification for legitimizing the Italian public subsidy to digital decoder. Crucially, the eligible decoders, besides incorporating some elements for “local” interactivity, were strategically designed to incorporate the CAS module and the smart card reader necessary to decrypt pay-TV services. Moreover, satellite decoders were considered non eligible, on shaky grounds\textsuperscript{33}; in practice, given cable absence and the laggard status of Italian broadband (dampening IPTV diffusion), the public campaign focused on DTT decoders. All in all, public money cross-financed the provision of a private good (pay-TV).

Obviously, thanks to the generous amount of the subsidy (roughly half of the average retail market price) and the massive advertising pressure\textsuperscript{34}, the first subsidization campaign (2004-2005) was highly successful, financing about two millions of MHP decoders. Moreover, beside engendering significant scale and learning economies, it implicitly credited DTT with being the “only” digital platform in front of the less observant (and majority) share of the population. Obviously, this kind of communication strategy is very effective, mainly during the switchover.

Likewise, the “price” effect of the subsidy acted as a mutually reinforcing complement to the attractiveness of the content – the pay-per-view offer based on football. An empirical confirmation for our hypothesis comes from the temporal distribution of the subsidies, which shows

\textsuperscript{32} Respectively, application programme interface and multimedia home platform. MHP is a technical specification developed in the late-Nineties by the DVB consortium, and then accepted as an official EU standard for API, to enable DTV interactive services.

\textsuperscript{33} A comprehensive technical analysis of the logical inconsistencies of Italian DTV policy-making and its faulty interactivity ambitions is provided by Matteucci (2009).

\textsuperscript{34} It was financed by the Government and incumbent analogue networks. The campaigns of the first often featured improper forms.
an irregular cyclical-like path with a few peaks (see graph 1). Indeed, this path does not match the
typical dynamics of epidemic models of technological diffusion, featuring a positive and rising
trend (up to the inflection point of the corresponding S-shaped cumulative curve). On the contrary,
in the first year (2004) the pace of diffusion varies with the media exposure of the DTT policy and
the subsidies exhaustion (October). More importantly, since January 2005 (launch of the pay-per-
view), decoders’ sales show a clear synchronicity with the duration of the First and Second Division
football championship.

The subsidy campaign was immediately opposed by Mediaset’s and La7’s competitors.
Following these claims, the EU Commission set up a long inquiry and, in January 2007, stated that
the Italian campaign did constitute an illegal state aid, incompatible with the common market; as
such, the aid had to be recovered from the indirect beneficiaries (the concerned broadcasters) (EC,
2007b).

Specifically, the Italian measure was found selective and distorting especially within the pay-TV
market, where it favoured DTT over satellite. In other terms, the public subsidy modified the
relative terms of the two services (in primis, the retail prices and the operators’ margins), and
thereby their competitive strength: so, DTT pay-per-view (hence Mediaset\(^{35}\)) was given an
advantage over satellite pay-TV (Sky).

Further, the Commission found another distorting effect influencing the platform choice in
favour of DTT, acting via the reduction of the initial household set-up costs; this effect is
particularly perverse, since it has been unfolding in a critical period – during the digital switchover -
when the bulk of the analogue viewers need to choose which digital platform to switch to. At the
same time, the decoder advantage translates into the discrimination of competing delivery networks
(such as satellite or IPTV), because the subsidized decoders were mostly mono-network.

Finally, another strategically crucial point is that most of the distorting effects are permanent

\(^{35}\) The final implementation of the Commission decision (Communication Ministry, 2007) stated that the operator that
really profited from the state aid measure was just Mediaset.
and self-enforcing: as argued by Matteucci (2008), the standard remedies available under the EU state aid regime can not affect the installed base of viewers, who face switching costs and exhibit strong behavioural inertia; neither can they compensate for the dynamic feedbacks enjoyed in the meanwhile by the privileged platform\(^{36}\).

Evidence on the anticompetitive effects of the public subsidy also emerges from third-party’s financial reports. For example, as early as 2005 Deutsche Bank (2005; p.26) argued that, thanks to the subsidies, «Mediaset can develop DTT as a low risk/low-cost way of entering the pay-TV market». One year later, the same analyst revised its valuation, upgrading its positive outlook on Mediaset pay-per-view and shares (Deutsche Bank, 2006).

Finally, simple elaborations on revenues data\(^{37}\) (see table 3) confirm our hypothesis that the main advantage of the public subsidy effectively run through pay-per-view and pay-TV revenues, given the strong predominance of the latter over advertising revenues. More generally, these data show that Mediaset and La7, with different results, based their DTT entry strategies on the pay business model.

[Table 3]

Is Italy the only case of biased policy-making? On one side, the existing literature points out that terrestrial TV is the platform mostly at risk (see Fontaine and Pogorel, 2006). Indeed, evidence of a bias in favour of DTT or incumbent operators can be occasionally detected also in other countries, both in EU\(^{38}\) (for Spain, see Garcia Leiva, 2008) and elsewhere (for US, see Galperin, 2004). In these cases, however, the bias appears occasional and minor\(^{39}\) and, in any case, benefits a large group of lobbying operators (potentially, all incumbents)

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\(^{36}\) In fact, the positive network effects stemming from increased diffusion have yet enabled a more aggressive premium content acquisition, which in turn has attracted new customers.

\(^{37}\) We decided not to use data on margins (such as EBIT, EBITDA) for their sensitiveness to content rights trading strategies and related accounting practices used for depreciation.

\(^{38}\) According to the EU norms regulating the communications sector (mostly, the New Regulatory Framework), the DTV policy must be market-oriented and platform (or technology) neutral. Any exception must be compliant with state aid rules.

\(^{39}\) For instance, concerning state aid for the digital switchover, Matteucci (2008) notices a minor bias in the DTT policy of the German Länders of Berlin-Brandenburg and North Rhine-Westphalia.
In this respect, the Italian model of DTT policy-making stands out as the most contentious and deficient among industrialised countries - for two main reasons, at least. First, for the massive and continuous public support of one unique platform (DTT), mostly managed by the Government\textsuperscript{40}. Second, the most striking point of divergence of the Italian policy and regulation remains their prevalent orientation to the private agenda of one unique dominant incumbent.

3.3 Recent market trends

Recently, Mediaset’s pay bouquet (Mediaset Premium) has been experiencing a robust growth in its pay revenues (+60\% and +105\% over 2008-7, and +56\% and +16\% over 2009-8, considering respectively strict and other pay-TV revenues, see table 3). Further, the latest estimates confirm that Mediaset Premium acts as a “second tier” offer: its ARPU for 2010 is expected to be 120\(\) per viewer (around one fifth of Sky’s one). Thanks to its price leadership and expanding content offer, Mediaset Premium may rapidly catch-up with the installed base of the leader, as seems to suggest the trend of its stock of smart cards: from 2.06 millions in 2007, it went up to 3.5 millions in 2009, with a target of 4.5 millions for 2010 (company’s estimates), very close to the current subscribers base of 4.7 millions detained by Sky.

Concerning interplatform competition, the market fundamentals look more favourable to DTT than satellite. The prospective larger (mass) penetration of DTT can compensate for the lower ARPU of this platform, enabling an “extensive” (rather than intensive) penetration strategy of its main pay bouquet. In particular, the increased momentum of Mediaset Premium can be traced back to the recent regional switch offs, that forced to DTT relevant portions of the analogue audience: graph 2 shows that, in fall 2009, with the switch offs of Lazio (including Rome) and Campania, DTT audience has almost doubled. In May 2010, after the partial switch offs of North Italy (to be

\textsuperscript{40} A high level of public intervention should not be blamed \textit{per se}; in fact, other noticeable terrestrial countries – such as France and UK - feature a strong public guide during the transition. However these countries carefully framed their support to DTT within a market-neutral and multiplatform DTV policy (Matteucci, 2008), mostly managed by independent authorities or by the PSB, rather than the Government.
completed in fall 2010), DTT reaches a share of 40% of the total TV viewing time – while satellite falls behind (nearly stable at around 15%, in the same period).

[Graph 2]

Obviously, the diverging pace of diffusion of the two platforms – with DTT capturing the bulk of the forced audience migration and satellite stagnating – differently impacts on the two digital business models. In fact, it reinforces the mixed DTT model of Mediaset, while puts under pressure that of Sky, closer to a “pure” (subscriptions-based) model. Moreover, a few recent normative changes also weakened the profitability of the pure pay model41. These forces inevitably impinge on the dynamics of companies’ accounts. On one side, concerning Mediaset, in 2009 it managed to boost digital advertising revenues (+127%, see table 3), despite the terrible recession of the economy and that of the TV advertising market (-15.6% in Italy). Equally, its subscription revenues progressed substantially (see supra, table 3), and further evidence (company’s data and analysts’ reports) prefigure that Mediaset Premium’s break-even point is approaching fast.

On the other, since the 2Q of 2009 (US fiscal year), Sky’s accounts have been worsening (see operating result in graph 3), going into the red after a quinquennium of continuous improvement42. Further, graph 3 shows that, after a quinquennium of steady progression and the peak of the 3Q of 2009, also the subscribers base is declining, mostly due to an increased churn rate (resulting from the business stealing effect by Mediaset Premium)43.

Considering these trends, we can easily explain why recently Sky has decided a change of strategy, publicly announcing a price war against Mediaset: it wants to oppose the increasing business stealing effect of the entrant, particularly dangerous during the switchover.

41 In 2009-10, the Italian Government doubled the VAT rate on subscriptions revenues and decreased the maximum daily amount of advertising allowed within pay channels.
42 With quarterly data, we need to compare inter-quarter dynamics.
43 Our hypothesis is based on Sky’s reports declaring that in the last three quarters gross subscriber additions were more than offset by existing subscriber cancellations.
Apart from Sky, Mediaset’s operations remain unchallenged, within and outside DTT. RAI’s digital strategy is blocked by political vetoes and a stagnating digital budget. La7, the biggest fringe operator, continues to be paralysed by the corporate instability of its parent company (Telecom Italia): after having sold its loss-making pay-TV branch to the Swedish operator Airplus, La7 continues to play a “low profile” digital strategy in FTA – mainly as a network operator. The Swedish entrant (branded as Dalhia TV), for the moment being, falls behind: in 2009, it registered a 0.5% market share (in total pay revenues, see AGCOM, 2010). Finally, IPTV cannot break a stalemate. Summing up the three incompatible operators (Alice Home TV-Telecom Italia, Fastweb-Swisscom and Infostrada TV-Wind), its diffusion is limited to 2.4% of total households; moreover, the laggard situation of Italian broadband does not let prefigure any substantial market change.

4. Conclusions

The success of pay DTT in Italy seems to challenge the received wisdom on multichannel TV, considering terrestrial TV a technically inferior and less competitive platform. Moreover, taking into account the chronic problems affecting Italian terrestrial broadcasting, in 2005 it would have been visionary to expect such a powerful threat moved so rapidly by an entrant to the satellite pay-TV incumbent.

Our analysis, framing business strategies within the larger institutional context, has sorted out this apparent paradox. We uncovered several explanatory factors. First, market dynamics naturally experience path-dependence, with limited degrees of freedom. Consequently, the terrestrial legacy of Italy naturally favoured DTT and pushed broadcasters to prioritize their existing platform, lobbying for a transition to digital TV entirely focused on DTT. Second, policy and politics may strongly influence media markets’ equilibriums. The Italian policy maker - closely intertwined with the private duopolist – gladly welcomed the terrestrial broadcasters’ sentiments, and even raised the stakes, engaging in biased policy-making and relaxing any binding normative constraint for DTT
incumbents. Further, the patent non-independence of the antitrust and communications authorities, together with the RAI’s blocked governance, did not exert any countervailing power, and this situation mostly benefited the dominant private incumbent. Third, the whole story confirms the findings of the media literature that company size, established brand and market concentration matter. Specifically, only the dominant FTA operator managed to successfully challenge the powerful incumbent of a lateral market (pay-TV). Fourth, for the diffusion of a new systemic technology such as DTT, a time-consistent strategy is needed, and Mediaset found it: due to the low and faulty DTT coverage, only a pay business model could ensure a close break-even, while preparing for the distant final switch off and gradually developing advertising revenues. More generally, the DTT entrant has weaved a complex web of subtle strategies, framing them within a larger - albeit highly contentious and market-distorting - public-private interplay.

All in all, due to its high specificity, the Italian case stands out as a noticeable exception to the rule, and does not convincingly challenge the received wisdom on the intrinsic market potential of the terrestrial platform.

Acknowledgments and Disclaimers

The author thanks UNU-MERIT, where the paper was written, for the research hospitality. The author would also thank two anonymous referees for their valuable remarks and comments, which improved the paper. Usual disclaimers apply.
Legal disclaimer. The present paper builds on a vast array of empirical evidence. For publishing reasons, most details have been suppressed. The author refers to the working paper version for a fuller justification of some claims and arguments.
### Tables, Graphs and Boxes

#### Table 1. Main TV-related indicators for selected countries, various years

<table>
<thead>
<tr>
<th>Population, 2007 (000)</th>
<th>GDP per capita, 2007 (PPP, €)</th>
<th>T-only HH, 2003 (%)</th>
<th>TV share of total adspend 2007-8 (%)</th>
<th>TV adspend per capita 2007-8 (€)</th>
<th>Average HH viewing time 2007 (h)</th>
<th>DTT launch and ASO dates</th>
<th>AT-only HH, 2007 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>82,247</td>
<td>28800</td>
<td>5.4</td>
<td>39.5</td>
<td>106.1</td>
<td>3.40</td>
<td>2002-8</td>
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<tr>
<td>Spain</td>
<td>44,874</td>
<td>26200</td>
<td>78.5</td>
<td>228.9</td>
<td>3.72</td>
<td>2005-10</td>
<td>61.5</td>
</tr>
<tr>
<td>France</td>
<td>61,707</td>
<td>27000</td>
<td>67.6</td>
<td>28.9</td>
<td>105.2</td>
<td>3.45</td>
<td>2005-11</td>
</tr>
<tr>
<td>Italy</td>
<td>59,336</td>
<td>25800</td>
<td>84.2</td>
<td>58.4</td>
<td>82.3</td>
<td>4.10§</td>
<td>2003-12</td>
</tr>
<tr>
<td>UK</td>
<td>60,975</td>
<td>29100</td>
<td>53.2</td>
<td>40.8</td>
<td>88.7</td>
<td>3.38</td>
<td>1998-12</td>
</tr>
<tr>
<td>EU-27</td>
<td>494,269</td>
<td>24900</td>
<td>45.5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1998-15</td>
</tr>
<tr>
<td>US</td>
<td>301,280</td>
<td>37900</td>
<td>n.a.</td>
<td>45.3</td>
<td>158.7</td>
<td>8.23</td>
<td>1998-09</td>
</tr>
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<td>59,336</td>
<td>25800</td>
<td>84.2</td>
<td>58.4</td>
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<td>1998-15</td>
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<td>45.3</td>
<td>158.7</td>
<td>8.23</td>
<td>1998-09</td>
</tr>
</tbody>
</table>


Source:
- Col.1: OECD Factbook;
- Col.2: Eurostat (tec 0001 series);
- Col.3: EC (2003; tab.1);
- Col.4-5: IP Network (2008);
- Col.6: OECD (2009);
- Col. 7: Our compilation;
- Col.8: IP Network (2008) and OECD (2009).

#### Table 2. Audience shares of major TV broadcasters in Italy (%)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RAI</td>
<td>47.3</td>
<td>47</td>
<td>46.4</td>
<td>44.9</td>
<td>44.3</td>
<td>43.3</td>
<td>43.6</td>
<td>41.8</td>
<td></td>
</tr>
<tr>
<td>Mediaset</td>
<td>43.4</td>
<td>43.2</td>
<td>43</td>
<td>43.9</td>
<td>43</td>
<td>42</td>
<td>40.3</td>
<td>40.5</td>
<td>83.9*</td>
</tr>
<tr>
<td>La7-TI</td>
<td>1.9</td>
<td>2</td>
<td>1.8</td>
<td>2.2</td>
<td>2.4</td>
<td>2.7</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Other terrestrial broadcasters</td>
<td>7.4</td>
<td>7.8</td>
<td>8.8</td>
<td>6.5</td>
<td>6.2</td>
<td>5.7</td>
<td>6.3</td>
<td>6.6</td>
<td>6.6</td>
</tr>
<tr>
<td>Satellite</td>
<td>2.5</td>
<td>4.1</td>
<td>6.3</td>
<td>9.1</td>
<td>8.1</td>
<td>9.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

*Cumulated audience of RAI, Mediaset, La7.


#### Table 3– Annual revenues of DTT operations, by broadcaster

<table>
<thead>
<tr>
<th>Advertising revenues</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediaset Spa</td>
<td>≈ 0</td>
<td>4.6</td>
<td>5.7</td>
<td>8.1</td>
<td>13.1</td>
<td>29.8</td>
</tr>
<tr>
<td>La7</td>
<td>0</td>
<td>≈ 0</td>
<td>≈ 0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(Other*) national broadcasters</td>
<td>0</td>
<td>1</td>
<td>n.a.</td>
<td>4.2</td>
<td>3.7</td>
<td>n.a.</td>
</tr>
<tr>
<td>Independent producers</td>
<td>0</td>
<td>[0.2-0.3]</td>
<td>n.a.</td>
<td>(all)</td>
<td>(all)</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pay-per-view/ pay-TV revenues</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediaset Spa (PPV/subscriptions)</td>
<td>n.e.</td>
<td>35.9</td>
<td>84.2</td>
<td>124.6</td>
<td>199.1</td>
<td>311.5</td>
</tr>
<tr>
<td>Mediaset Spa (other pay revenues)</td>
<td>n.e.</td>
<td>4.4</td>
<td>18.6</td>
<td>94.3</td>
<td>192.9</td>
<td>223.5</td>
</tr>
<tr>
<td>La7</td>
<td>n.e.</td>
<td>6</td>
<td>10</td>
<td>12</td>
<td>11</td>
<td>-</td>
</tr>
</tbody>
</table>

Legend: Millions of €. n.e. = service not existing/branch sold. n.a. = data not available. * = Includes: RAI, HCSC Italia, Espresso Group.

Graph 1. Weekly public subsidies disbursed for purchase of DTT decoders (thousands)

Source: our computations on unpublished data from the Italian Ministry of Communications

Graph 2. Average monthly ratings of DTT channels in Italy: 2007-2010

Legend: Monthly ratings of (all) DTT channels with respect to total TV viewing time. The total includes analogue TV, DTT, satellite and IPTV, both FTA and pay.

Source: DIGITA newletters, available from www.dgtvi.it
Graph 3. Quarterly operating result and subscriber base of Sky Italia, 2005-10

Legend: Quarterly operating result (mil. $; left scale) and subscriber base (mil.; right scale).
Source: Our compilation from Newscorp. consolidated accounts. US fiscal year (1Q ending September 30).

Box 1. The Centro Europa 7 case.

An extreme example of opaque norms, chronic non enforcement of the law and policy biased in favour of incumbent operators is the story of Centro Europa 7, a small broadcaster which, despite having been granted in 1999 two analogue national licences, did not receive from AGCOM and the Ministry of Communications the spectrum needed to transmit. After a long and ineffective judicial odyssey through Italian courts, Centro Europa 7’s legitimate rights were eventually acknowledged by the European Court of Justice (in January 2008). Nevertheless, despite the European ruling and its direct applicability, the restoration was late, partial and discretionary. First, in December 2008, the Italian Ministry of Communications implemented the European ruling, switching spectrum to Centro Europa 7. However, the spectrum divestiture only affected RAI, whereas Mediaset and its Rete 4 – broadcasting without having won the 1999 beauty contest - were not touched. As a result, RAI’s coverage has worsened in several areas, and this conflicts with its stricter public service and coverage obligations. Moreover, the amount of spectrum assigned to Centro Europa 7 was insufficient to build a national network, and the economic compensation set by the court for the forced inactivity was negligible. Eventually, in spring 2010, additional frequencies were assigned to Centro Europa 7, and the case was finally closed. The broadcaster plans to start its digital operations in mid-2010 - 11 years after having won the beauty contest.

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