

A REFERENCE MODEL FOR ANALYZING MOBILE NETWORK OPERATORS' STRATEGIC POSITIONING

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Abstract: The revolutionary changes the Mobile Telecommunications Industries is going through are forcing the Mobile Network Operators (MNOs) to radically reshape their strategies, according to the newly emerged market's value drivers. The purpose of this study is to provide an original reference model for supporting the analysis of MNOs' strategic positioning. Employing the multiple exploratory case studies research methodology, the study identifies five dimensions or classification variables - Content creation & innovation management, Mobile Advertising integration, Communities and Social Networking focus, Charging & billing systems leverage and Network infrastructure management – through which describing and assessing an MNO's strategic positioning; consequently the model is applied to the four Italian operators, so to obtain a validation as well as a picture of the adopted strategic positioning. The findings show two alternative and quite contradictory “strategic extremes” the operators are swinging between seem to be emerging: the Pure Carrier positioning, and the Media Company positioning. In between, the Smart Pipe positioning sees the operator making the most out of its assets, gaining the role of the third parties' offer enabler.

1 INTRODUCTION

After many years of unquestioned market leadership in the Mobile Telecommunications industry, mainly due to the possession of inimitable assets and to the unique relationship established with the end customer, the Mobile Network Operators (MNOs) are currently finding themselves in the midst of a period of turbulent market transition, where the different interacting dimensions of uncertainty make an accurate prediction of the environment's development virtually impossible (Courtney et al., 1997).

The decline of voice services revenues (Muller-Veerse, 1999; Arthur D. Little, 2001;), the refocus on the Mobile Content segment, the crisis of the traditional “walled garden” approach that drove to an higher openness to off portal, the rise of third parties with the need of developing appropriate agreements and revenue sharing models (Maitland et al., 2002; Olla, Patel, 2002; Kuo, You, 2006; Peppard, Rylander, 2006), and the imminent revolution determined by the clash with the Internet

industry are only some of the challenges the operators are now forced to face.

Therefore, in the short run, the key issue for MNOs will definitely be the structural rethink of their strategies and business approaches.

When confronting this strategic priority, however, MNOs appear to be lacking a clear direction, and the strategies they are adopting are far from being unambiguous.

Though initially all operators showed a strong interest in shifting from the “must carry” to the “must offer” paradigm – the first seeing the availability of the network infrastructure as the core asset and source of competitive advantage, while the second recognizing the role of the multimedia content and services portfolio provisioned as the true market essential facility, recently this trend seems to be inverted, and some players are starting to consider the option of withdrawing from the downstream activities of the chain to refocus on the core business, that is, the activities related to network provisioning.

Given this gradual departure from the initial

generalized approach, it becomes increasingly important to identify which are the main strategic positioning alternatives the MNOs can now adopt, as well as which core assets they will have to leverage on to succeed in the unsettled Mobile Value Network.

Nevertheless, the undergoing radical internal and external changes make it more and more difficult to understand which drivers or classification variables will allow to discriminate from one strategic positioning to another.

In the light of the portrayed situation, the purpose of this paper is to develop a model capable of supporting the strategic positioning analysis of Mobile Network Operators: through the definition of a set of relevant "strategic dimensions", whose combination gives rise to a specific strategic positioning, the model will allow to infer how the operators are reshaping their business configuration, and what solutions are currently adopting.

The study, focused on the MNOs operating in the Italian Mobile Telecommunications market, is structured as follows: at first, the research methodology employed will be analyzed; afterwards, the original MNOs' strategic positioning reference model developed will be presented, and consequently applied to the four Italian MNOs; as a conclusion, the study's key implications will be discussed, and some indications for future works will be provided.

2 RESEARCH METHODOLOGY

The present research is based on case studies, defined by Yin (2003) as "empirical inquiries that investigate a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used".

Qualitative research methodology was chosen as particularly suitable for reaching the research objectives, which aim at understanding the complex phenomenon of strategic positioning within a given industry – i.e. Mobile Telecommunications – and with reference to a specific typology of players – MNOs, and thus at building new theory – or extending existing theories – on it.

To accomplish the previously identified research propositions, from January to June, 2008, in-depth exploratory case studies on the 4 companies possessing a license for acting as a Mobile Network Operator in Italy – TIM, Vodafone Italy, 3 Italy and

Wind – were performed. In addition to this, so to obtain a better insight concerning MNOs' strategies and positioning, the 4 case studies, made of 16 interviews, were integrated by information collected through a further set of 90 case studies on "third party" firms involved in business activities with the previously identified operators. These additional case studies, performed in the same period of time, were carried out within the wider 2008 Mobile Content Observatory research (Bertelè et al., 2008). As a whole, 138 interviews – both face-to-face and phone interviews – were held with 110 persons identified as key participants in the MNOs' strategy definition process at different levels, as well as informants belonging to third party firms. The population of informants included top and middle managers – e.g. Presidents Chief Executive Officers, Chief Information Officers, Chief Financial Officers, Marketing & Sales Managers, Project Manager, Software Engineers and Developers. The semi-structured nature of the questionnaire made possible to start from some key issues identified through the literature, but also to let innovative issues emerge.

The choice of focusing the research on the Italian Mobile Telecommunications context is justified by its very characteristics: on the one hand, the market is extremely mature (Informa Telecoms & Media, 2008), but on the other it has always been positioned at the forefront in industry innovation at a global level (Bertelè et al., 2008).

Coherently to the research methodology employed (Pettigrew, 1988), firms were not randomly selected, but the theoretical sample was made of firms that conformed to the main requirement of the study, while representing both similarities and differences considered relevant for the data analysis.

A multiple case study approach reinforced the generalizability of results (Meredith, 1998), and allowed to perform a cross analysis on the variables under scrutiny, to pinpoint differentials in terms of strategic positioning – to see which variables changed and which remained constant going from one alternative to another, due to the presence of extreme cases, polar types or niche situations within the theoretical sample (Meredith, 1998).

Since the research needed to focus to different subunits of analysis, the embedded (i.e. multiple unit of analysis) case studies was adopted. The scheme of analysis developed included the following main units of analysis:

- company profile;
- business model components;
- products and services performances;

- value network positioning;
- strategy developed.

As the validity and reliability of case studies rest heavily on the correctness of the information provided by the interviewees and can be assured by using multiple sources or “looking at data in multiple ways” (Eisenhardt, 1989; Yin, 2003), multiple sources of evidences or research methods were employed: interviews – to be considered the primary data source, analysis of internal documents, study of secondary sources – research reports, websites, newsletters, white papers, databases, international conferences proceedings. This combination of sources allowed to obtain “data triangulation”, essential for assuring rigorous results in qualitative research (Bonoma, 1985).

3 THE STRATEGIC POSITIONING ANALYSIS REFERENCE MODEL

The research carried out through the multiple case studies allowed to shed light on the key dimensions or classification variables that make it possible to discriminate from different strategic positioning alternatives, thus making inferences on the main configurations the Italian MNOs are adopting.

The findings are synthesized in the “MNO strategic positioning reference model” below provided, which identifies five macro-dimensions:

1. *Content creation & innovation management*: it expresses the operator’s presidium of the upstream activities related to content creation, aggregation and publishing, as well as the overall process of content & services portfolio innovation, typically performed by third parties – Content Providers (CP) or Mobile Content & Service Providers (MCSP). A high level of involvement in the control and management of third parties’ offers published “on deck”, i.e. on the operator’s mobile portal, indicates that concentrating in the Mobile Content segment represent a strategic priority for the MNO.
2. *Mobile Advertising integration*: it refers to the integration of Mobile Advertising within the operator’s overall business model. An high diffusion of Advertising-based models promoted by the operator expresses its vocation to act as a “Media Agency”, consequently extending its core business towards neighboring and complementary areas.
3. *Communities and Social Networking focus*: it expresses the operator’s approach towards Social Networking and Community value added services. Such services clearly represent the new differentiation driver of the Mobile Content offer, the only element capable of increasing the end customer’s “stickiness”. Thanks to the concept of interaction Social Networking relies on, which constitutes the true value of mobile communications, this service category shall become the package all other services like Infotainment, Mobile Games, Music and Video, are bundled in: by placing the content in the middle of users interactions, the operator can exploit all the offer portfolio synergies at his hand, thus creating a unique user experience. Therefore, the choices related to the role the MNO decides to take on regarding Social Networking – also with reference to the possibility of integration with the Web Instant Messaging communities – will strongly affects its positioning, reflecting its resolution of either actively covering the downstream activities of the Mobile Content value network, or to relegate itself to data traffic transferring. In fact, should the operator give up the control of Social Networking, and grant its customer base an access to the Internet Instant Messaging communities, it would attract a large number of potentially new users, benefiting from revenues from data traffic; on the other side of the coin, however, it would risk to cannibalize its traditional messaging services – like Sms and Mms, losing the related sources of revenues.
4. *Charging & billing systems leverage*: it concerns the exploitation of the operator’s charging and billing proprietary systems and the provision of such core asset to third parties, to enable the mobile transactions between them and the end users. Being the operator the only actor within the Value Network qualified to charge and consequently bill the content and services cost to the end users’ credit, third parties’ offer shall inescapably pass through the establishment of an agreement with the MNO to rely on its unique systems. The higher the leverage on this asset, and the wider the number of partners with a granted access to these system, the more open the operator towards third parties: in such scenario, the MNO is configured as a facilitator and enabler of other player’s business.
5. *Network infrastructure management*: it indicates the extent to which an operator focuses on the

provisioning of network infrastructure functionalities to third parties, like interconnection, connectivity, data transfer and network operations management. An high rank on the network infrastructure management dimension shows the MNO's willingness to concentrate on the role of "bit pipe" provider.

While variables 4 and 5 are mentioned in literature – for instance, see Kuo, Yu (2006) and Peppard, Rylander (2006), the other three are originally identified through the case studies, thus representing an extension to existing theory.

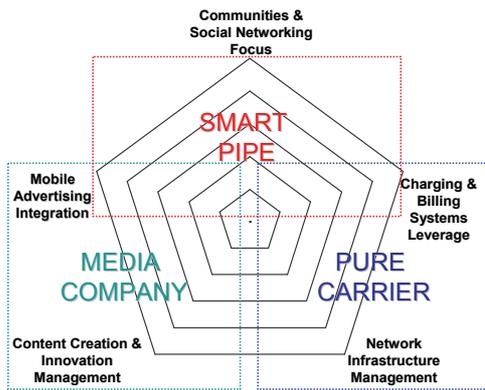


Figure 1: The MNO Strategic Positioning Pentagon Model.

The original "MNO Strategic Positioning Pentagon" model shows the combined coverage of the five dimensions, drawing a perimeter that delimitates the current MNO's business scope.

Different combinations of the previously identified dimensions can give rise to three main strategic positioning an MNO could adopt:

1. the *Media Company* positioning;
2. the *Pure Carrier* positioning;
3. the *Smart Pipe* positioning

The *Media Company* positioning sees the MNO strongly involved in the end-to-end activities related to the creation, management and delivery of mobile digital content. The operator exerts a strong control on the content published on the mobile portal and on the related revenues, typically establishing revenue sharing models where limited margins are paid off to third parties. At the same time, the MNO is interested in acquiring a significant share of the revenues related to Mobile Advertising, and tries to operate as a Media Agency as well.

Therefore, an operator positioned as a *Media Company* will be characterized by an unbalance towards "Content creation and innovation management" and "Mobile Advertising integration"

The *Pure Carrier* positioning, on the contrary, is based on the refocus on the original core business, that is, the activities related to the network infrastructure and the provisioning of its functionalities – e.g. interconnection, access, connectivity, bandwidth. The logic underlying such reorientation, similar to the trend that took place in the Internet market involving the Internet Service Providers, is that the MNO has gone too far in extending its reach on the value network activities, abandoning its core and entering new areas it does not have the right resources and competences to cover. Therefore, by giving up the direct control of some downstream activities, by granting access to its customer base to new entrants – like the Web Companies – and by concentrating on data transfer, the MNO would significantly increase the network's traffic, benefiting from higher revenues from network provisioning. The risk related to this option is to experience a depletion of the operator's role: after having undertaken heavy investment to install the infrastructure and acquire 3G licenses, it would not be able to retain an adequate share of the revenues it is enabling.

Within the model, this positioning is expressed by the prevalence of "Network Infrastructure management" and, to some extent, of "Charging & billing systems leverage" dimensions over the others.

In between these two "strategic extremes", a *continuum* of alternative solutions are available. The most significant that is worth mentioning is the emerging *Smart Pipe* strategic positioning.

In such configuration, the MNO leverages on the overall range of its core assets, i.e. the network infrastructure, the 3G licenses, the charging & billing systems, the proprietary distribution channels, the strong brand awareness, the direct access and deep knowledge of its customer base – in terms of users profiles and behavior – to propose a portfolio of enabling and facilitating business services to the market's third parties – e.g. MCSPs, CPs, Advertisers. Therefore, the MNO takes on the role of enabler and facilitator of its partners' offer: on the one hand, withdrawing from some downstream activities more related to the market making of content and services; but on the other, enhancing its undercurrent position of foundation of the whole value system.

The "Smart Pipe" concept stresses the fairly new combination of a "bit pipe" role, where the MNO mainly acts as a carrier, with a more far-seeing thorough management of its assets. According to this vision, the network, from being the operators'

core business, becomes “core to their business” (Nordmann, 2006).

The revenues streams the operator benefits from are mainly related to data transfer, charging & billing fees, advertising fees and a further fee for the provision of data and information concerning the end user – track history, profiles and preferences, usage data etc.

A Smart Pipe positioning is characterized by a focus on the Charging & billing systems leverage and the integration of Mobile Advertising modes, as well as by a heavy control over Social Networking, seen as the “umbrella service” under which all others are bundled.

After having described the original model’s constitutive variables, in the next section it will be applied to the four Italian MNOs, so to test the framework validity and get a valuable insight on the actual “state of the art” concerning the operators’ strategic positioning.

4 THE MODEL APPLICATION TO THE ITALIAN MNO

The application of the model to the 4 Italian MNOs allows to gain a significant insight on the main strategic positioning alternatives these actors are currently adopting, as well as to obtain a first model validation.

According to the both qualitative and quantitative information collected through the case studies, an Interval or “Likert-like” scale was employed to evaluate the coverage of each dimension: a 0 to 5 ranking was then associated by the authors to each classification variable for every MNO. The rationale followed implies that the higher the ranking on a given variable is, the more the operator focuses on such dimension in shaping its strategic positioning.

The operator Wind seems prone to adopt a Pure Carrier positioning: its recent investments are mainly directed towards the enhancement of the network infrastructure management, as well as towards the proper leverage on charging & billing.

The i-mode business model adopted – licensed from the Japanese operator NTT DoCoMo – and the related revenue sharing agreements, characterized by high shares granted to content and service providers, leave wide discretion to third parties, without a strict control over their activity; the access to the operator’s billing platforms is also granted with little constraint to a plethora of partners.

The MNO focuses its Mobile Content offer on Infotainment browsing rather than innovative and

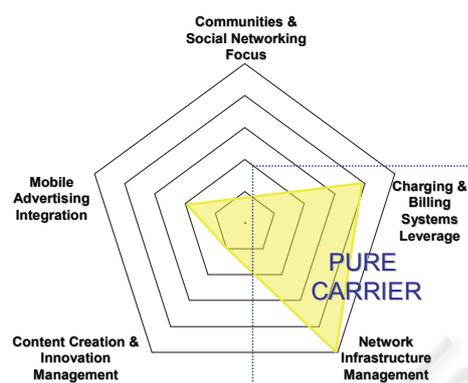


Figure 2: Wind Strategic Positioning.

multimedia services; moreover, the integration of Mobile Advertising is only at an embryonic stage.

The operator Vodafone Italy appears to be moving towards the renewal of its role, through a significant trend of openness to third parties – a survey performed within the research showed that the number of content providers on “hybrid” or “friendly off-net” mobile sites, i.e. partners’ external sites with a link on the operator’s portal, was characterized by an annual growth rate of 400% from 2007 to 2008; at the same time, a new pricing policy eliminating the navigation costs for the users on hybrid sites was introduced, paralleled by a strengthened control over the key assets of Social Networking services – reflected by the acquisition of the Web 2.0-oriented company Zyb, and the launch of the mobile social network platform “Vodafone Friends” – and of charging and billing systems. In addition to this, a strong effort has been put on the development of Mobile Advertising.

In the light of these consideration, it is possible to claim that the MNO is currently positioned as a Smart Pipe.

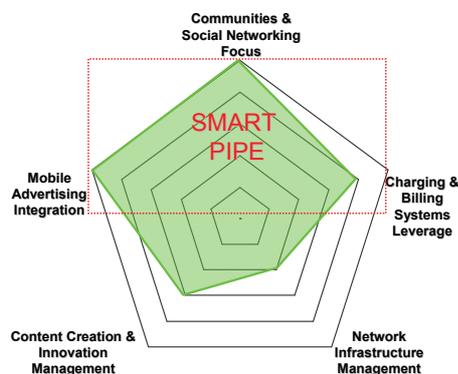


Figure 3: Vodafone Italy Strategic Positioning.

Concerning the operator 3 Italy, last entrant in the market, the model confirms its effort in positioning itself as a Media Company, because of the high innovation of the services offered – also confirmed by the significant investments in Mobile Tv and on the DVB-H standard, and the heavy reliance on Advertising-based models, counterbalanced by some limitations and criticalities in the network-related performances.

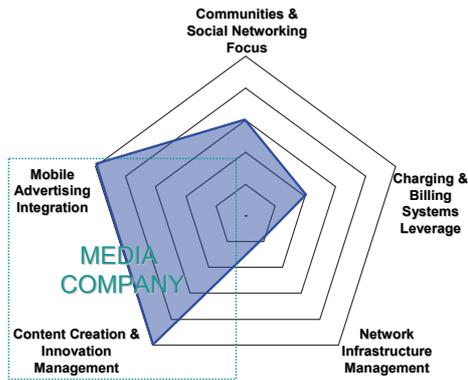


Figure 4: 3 Italy Strategic Positioning.

As regards to TIM, the market leader in terms of customer base, what emerges from the model’s application is a “fuzzy” positioning, laying between the Media Company and the Smart Pipe solutions. In fact, on the one hand the operator has a strong focus on the network infrastructure and the charging & billing platform assets – inherited by its mother company, the ex-monopolist for fixed telephony Telecom Italia; on the other, however, it shows a remarkable interest in developing Social Networking services – a vivid example of this approach is represented by the “TIM Tribe”, as well as Mobile Advertising models. The control of content published on portal is also high.

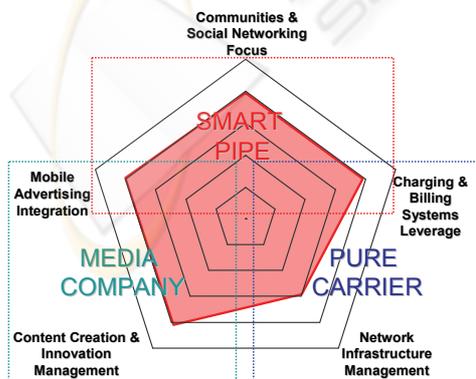


Figure 5: TIM Strategic Positioning.

As a whole, it is possible to argue that the strategic positioning alternatives emerging through the model’s application are significantly diverse. To tackle the “wind of change” blowing on the Mobile Industry, the players seem to be taking different directions, trying to exploit the current market’s fluidity to reposition themselves and lay the foundations for future sustainable competitive advantages over the competitors, both incumbents and new entrants.

It is hard to predict which model will prevail in the medium-long run: however, as soon as the market situation will consolidate, and as the positioning adopted will crystallize, the choices made today will strongly impact on the operators’ performances and chances of success.

5 CONCLUSIONS AND FUTURE WORKS

The research provides an original reference model for supporting the strategic positioning analysis of Mobile Network Operators.

The findings show that the analysis of the reshaped operators’ positioning goes through the definition of new key strategic dimensions.

In fact, the model identifies an original set of 5 variables – Content creation & innovation management, Mobile Advertising integration, Communities and Social Networking focus, Charging & billing systems leverage and Network infrastructure management, where the first three are newly defined and were inferred from the case studies performed.

Concerning the variables combinations, two alternative and quite contradictory “strategic extremes” the operators are swinging between seem to be emerging: the Pure Carrier positioning, and the Media Company positioning. In between, the Smart Pipe positioning sees the operator making the most out of its assets, gaining the role of the third parties’ offer enabler.

The rigor of the qualitative research method employed and the theoretical sample’s significance grant, reliability and, to some extent, the generalizability of the model’s results. The number of case studies, and the fact that the model’s variables are drawn from a wide sample of cases, while the model is then applied only to a subset of the analyzed firms – that is, the 4 MNOs, also contribute in limiting the issue of tautological validity the model may be burdened with.

The paper's value for researchers can be brought back to the extension of Strategic Analysis theories with reference to the Mobile Telecommunications Industry, thanks to the creation of a model capable of identifying newly emerged strategic dimensions and positioning alternatives.

The value for practitioners lies in the provisioning of a tool for mapping existing and future strategic positioning adopted by MNOs, thus gaining a valuable insight on these player's moves, as well as on the market's competitive configuration.

The paper represent a noteworthy attempt of developing an *ad hoc* model for supporting strategic analysis on the Mobile Industry. However, it does not shed light on the different performances acquirable through the adoption of a given positioning. Future works will have to concentrate on making the relation between positioning and performances explicit, and on carrying out a benchmarking analysis of the different alternatives available.

In addition to this, concerning methodological soundness, the model shall be applied to a different sample of MNOs, in order to test its validity outside the first sample which originated it, so to solve the issue of tautological validity.

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