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Empirical analysis on the normative reasoning of media policy in Europe:
Focusing on the presence of a public service broadcaster and entry barriers by a licensing system in the broadcasting market

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This study attempts to verify the functions of the main part of the media policy in European society, especially through the establishment of a public service broadcaster (PSB) and the creating of entry barriers by a licensing system in the terrestrial broadcasting market through developments in social psychology and communication theory. Thus far, media policy has been examined normatively and theoretically, but less rigorous proofs were provided. Our analysis integrates patch-worked and multidimensional past researches and clarifies the causal relationships in the overall picture through a structural equation model (SEM) using data from various social surveys. This reveals that these policies have a positive effect on people’s acquisition of the basic requirements for democracy, the development of social capital and people’s quality of life, happiness.

Key words: Media policy, broadcasting regulation, democracy, social capital, happiness, structural equation model.

INTRODUCTION

The purpose of this study is to analyze the effects of media policy by quantitative measures in a coherent and integrated way. While media policy indeed fosters basic functions of a democratic society, most of the research in this field remains qualitative and theoretical or patchworked partly because the objectives of media policy are manly abstract and presume theoretical causality. This study will verify the multi-level functions of media policy more rigidly based on the developments in media studies.

The primary goal of media policy is often regarded as the maintenance of pluralism through the prevention of excessive commercialism, and this is mainly considered to contribute to a basic requirement of a democracy (European Commission, 2009). This consequentially leads to an increase in social capital and people’s quality of life, happiness (Sunstein, 2001). To achieve this goal, state intervention through, for instance, the establishment of a public service broadcaster (PSB) or by creating barriers to entry by a licensing system and imposing some content-related obligations has been permitted. However, these policies are mainly based on normative reasoning about what media policy ‘should be’ (Barendt, 2005; Craig, 2011). This approach presumes that differences in media ownership influence the effects of the mass media on society (Lazarsfeld and Merton, 1948) and that harsh competition to increase the audience for advertising tends to make the content more leisure-oriented. Thus far, however, there has been little discussion on what might constitute a proof of the causal nature of this relationship (Holtz-Bacha and Norris, 2001) and its political or cultural dimension has often been
analyzed to the detriment of a quantitative dimension (Casarosa, 2010).

In these areas, economists or policy analysts usually tend to estimate a demand curve and evaluate the policy by quantifying these effects. However, in the media industry, pricing policy is not necessarily decided according to the cost of services, but by the value judgments of each consumer (Shy, 2001) and this makes conventional economic analysis of media policy difficult. But they tend to ignore the developments in social psychology and communication theory where empirical and effect-based analyses have been made through patch-worked and multi-dimensional research (Neumam and Guggenheim, 2011).

Recently, there has been a convergence of telecommunications and broadcasting, and the debate over the rationale behind media policy has arisen once again (Sunstein, 2001; Tewksbury, 2005). The assertions of those involved are reinventing the argument of media policy to fit in with the new technologies, but their reasoning is still based on the normative presumption that media policy contributes to the basic requirements for democracy (Baker, 2006), finally contributes to an increase of social capital, and so forth.

Against these developments, this study employs the structural equation model (SEM) to examine the effects of media policy by observing variables representing media policy based on the developments in media studies and normative objectives in Europe, mainly in EU Member States.

**REVIEW OF THE RATIONALE OF MEDIA POLICY AND DEMAND/CONSUMER-BASED ANALYSIS**

Traditional rationale and emergence of changes from enforcement on the ground

First of all, the fundamental reasoning of media policy will be reviewed and the latest developments for further modification will be discussed. Since media policy is reflected in each country’s culture, there has been little movement for convergence if the culture itself is diverse. In the EU, there are many differences in the approach to media policy, but we find mainly two famous discourses among the various jurisdictions, and these can be applied to Europe.

One is centered on the public sphere approach, as advocated by Habermas (1995). This idea regards the protection of media pluralism as valuable in itself. In the EU, media policy is strongly presumed to be one of the basic conditions for the existence of democracy, and is said to play an essential democratic, social and cultural role. These understandings are reflected in legal arenas. This concept is stipulated in the protocol of the TFEU (Treaty of Functioning European Union) and influences the standards of judgments in decision-making or policy-making in the context of political or cultural policy.

Judgments by the European Court of Human Rights presume that audiovisual media have a more direct and stronger influence on society than print media and this justifies state intervention in the media market. The causal relationship between media exposure and people’s behavior or the nature of society is the precondition for the judgment.

The second is centered on improving consumer welfare. This asserts that maximizing the number of media outlets and maintaining plenty of choices will improve public welfare. But this is not strongly supported in the EU. The US situation is also similar to the EU. While the objectives of media policy in the US are set as pluralism, diversity and localism, there is little research to measure the achievements of these goals and we need to prove how these affect outcomes such as social capital or happiness.

In this context, various welfare indices have recently been proposed by economists to analyze the outcome of media policy (Stucke, 2011). These are still theoretical and supportive, but correspond to the strengthening of the ‘economic’ approach of EU competition law (Whish and Bailey, 2012). Even if the public sphere approach is influential in media policy, competition law is the final trump card with regard to real business such as M&As in the media industry. Although legal interpretations of media law tend toward a Habermas-oriented approach, there are various cases in which reconciliation between economic analysis and a right-based approach have to be attempted (Arino, 2004; Gentzkow and Shapiro, 2008). As ‘modernization’ proceeds in EU competition law, economic analysis focusing on consumer welfare has become prominent and a bridge between the two approaches has to be built.

**Developments of methods for empirical analysis**

The empirical economic analysis of media policy remains underdeveloped compared to other industries and recent studies have shown a few meaningful models from the perspective of welfare (Anderson and Coate, 2005; Anderson, 2007). Particularly, as there are very few past studies on the demand side, the whole picture of media policy is still unexplored and requires further development (Frey and Benesch, 2008).

However, social psychology and communication theory have accumulated studies on social capital and have proposed the need to take the views of every sector of society into account (Romer et al., 2009; Bruni and Stanka, 2008). The relationship between the viewing of television and social capital, or the collective value of social networks and their function of fostering democracy and political involvement have been explored (Putnam, 2000; Schmitt-Beck, 2002; Curran et al., 2009). Furthermore, the value of information goods, such as
broadcasting, has been measured by subjective ‘happiness’ (Bruni and Stanka, 2008) and a positive relation between social capital and happiness has also been observed (Helliwell and Putnam, 2004). Developments in media economics are considered to be expansions to highly interdisciplinary research efforts that lie outside the traditional economic realm (Napoli, 2009). They will be supported by emerged wide-ranging discussions on the function and utility of the media in social psychology and communication theory.

In the evaluation of public policy in general, the development of social psychology and communication theory has created new insights for areas where the framework of general economic analysis cannot easily be applied (Diener et al., 2009; Kahneman and Krueger, 2006; Kahneman, 1999; Coyle, 2010). Research on happiness, well-being or social capital, for example, shows that this method has the potential to be used as an outcome of media policy, since it can be applied in the case of value judgments.

Simple application has to be avoided since the mass media have multi-stage effects on society itself and the individuals in society, but the necessity of these measures is supported by empirical analysis on media policy.

In recent literature, approaches for the whole framework of the industry were advocated based on integrated data analysis. The effects on product variety in daily newspaper markets or programming variety in radio broadcasting by ownership concentration are clarified (George, 2007; Berry and Waldfogel, 2001) and the effects on price, cost and so forth in Korean multichannel market by ownership concentration ratio are investigated (Hong, 2011). In addition, from the perspectives of commercialization, the relationships between media systems and environments and political trust through patterns of news exposure and attention are analyzed (Aarts et al., 2012). The interests of these studies are close to this paper, but their focuses are not related to contribution to democratic functions of media by step-by-step regulatory effects but its relationships with contents' variety and quality.

**Design of the model: perspectives analyzing media policy and its effects**

For setting up a hypothetical model, three perspectives will be examined based on the above development of the studies in various fields. Firstly, regulatory effects on the viewer’s share of news or current affairs content in broadcasting are to be focused on.

Media policy, especially in the broadcasting market, is designed normatively to facilitate the potential of broadcasting as an efficient and wide-ranging medium for contributing to the basis of a democratic society (Keller, 2011). In reality, governments introduce measures to restrain heavy competition among commercial broadcasters for advertisements, because allowing them to make a profit will give them an incentive to prevent an undersupply of news or current affairs content for following the normative functions of creating a platform for sharing basic information within society (Salomon, 2008). In addition, especially in Europe, the PSB has acquired a unique presence as another regulation through an evolution which is dissimilar from the Public Broadcasting Service (PBS) in the US. The main reason for establishing a PSB is to avoid ‘a race to the bottom.’ Originally, entry barriers and content-related obligations (although these are often “indirect” schemes that take account of freedom of speech) in terrestrial television were introduced as a result of the scarcity of radio waves. However, the effects the regulation policy-makers expected were actually to maintain the share of news or current affairs content, because this will finally affect people’s viewing habits and minds for the creation of a healthy democratic society.

Regulations such as the establishment of a PSB and permitting some degree of media concentration as a result of the creation of entry barriers by a licensing system with indirect content-related obligations will affect the behavior of the broadcasting companies and finally the share of the genre people are exposed to will tend to have more news or current affairs content rather than merely leisure-oriented contents (Noam, 1987).

Secondly, influence on the knowledge and attitudes of the people or the communication process by exposure to news or current affairs content will be reviewed.

In social psychology, communication theory or legal normative thinking, watching TV has a great impact on people’s behavior (Hooghe, 2002). The first perspective also presupposes that people’s minds or society will be widely influenced by TV viewing and exposure to news or current affairs content is considered to give people the basic information for participating in politics or a democratic society and nurture their minds with respect to these matters. This is supported by various traditional studies in the field of social psychology, such as priming or agenda-setting (Iyenger et al., 1982). It is also shown that exposure to the media will influence the communication process (Rooke, 2009) and will have the potential to bring about a basis for mutual understanding by the people (Lee et al., 2010; Southwell and Yzer, 2007). This relation is proved in the analysis of the function of agenda-setting by mass media (McCombs, 2004). Particularly in the US, various cases have been observed and analyzed by experts in many fields (Lippmann, 1922).

Although, some theories claim that watching television will diminish social capital through examining factors such as tolerance or respect for other people, others insist that the resultant effects vary according to the programs people are exposed to, and that news or current affairs content will increase social capital (Putnam, 1995;
Freitag, 2003; Norris, 1996; Shah et al., 2001). This conflict will therefore be tested in our study. Third, final goal of media policy—ranging from social capital to quality of life, happiness - will be observed.

Increasing social capital is not necessarily the final goal of media policy. From the perspective of public policy, recent developments show that happiness or other measures quantifying satisfaction are useful indices with which to check the final policy goal.

Recently, the notion of happiness is being developed for measuring consumer welfare as an overall measure of satisfaction in the context of law and economics (Posner and Sunstein, 2010). Recent research also shows that happiness is understood as the outcome of a social interaction process (Haller and Hadler, 2006). Therefore, it can be considered that an increase in social capital will have a positive impact on happiness. Media policy is originally or normatively designed to contribute to the maintenance of pluralistic basic information, a fundamental of democratic society, but from the viewpoint of each person, this is one of the means to enjoy satisfaction in an individual's life.

The factors and outcome presented above are interrelated and multi-layered, and the logic connecting them can be represented by the following hypothetical model (Figure 1). Primary media policy in question affects the ratio of viewing news and current affairs programs to total TV viewing time. People's attitudes towards politics and current affairs, the levels of information on politics and positive involvement in politics are considered to be influenced by the viewing ratio, which leads to people's acquisition of the basic requirements for democracy. The acquisition of these requirements enhances general indices of social capital, which is measured by tolerance and respect for other people. Finally, the acquisition of these requirements and fostering social capital influence happiness, which is also affected by the viewing ratio (Speck and Roy, 2008).

**RESEARCH METHODS**

The hypothetical model will be tested by the SEM (Structural Equation Model) to identify the causal relationships among the factors. As an ordinary measure, simple regression analysis is suggested but it does not adequately examine the complex multi-dimensional relationships since its explanatory variable is regarded as exogenous and the relationships between models are independent.

Under the hypothetical model this study sets up, each factor has the possibility of connecting with other factors in multi-dimensional relationships. Therefore, the SEM is preferable because it combines the features of path analysis and factor analysis and hypothesizes causal relationships among variables (Joreskog, 1973). It also tests the causal models with a linear equation system, it being possible for the models to involve either manifest variables, latent variables, or both.

As pointed out in a past study (Holbert and Stephenson, 2003), analysis based on the SEM has to be dealt with carefully since various indirect effects are omitted from the discussion and the analysis therefore tends to fail to grasp the overall influence of the media. In this study, therefore, indirect effects such as people's inclinations or perceptions will be presumed in the modeling and estimation. The SEM itself is a very useful tool and has the potential to provide the baseline for reviewing policies if attention is paid to its weak points.

**Data analysis**

The following factors will be used in the estimation: PSB share, concentration (C3), viewing habits (the ratio of news viewing time to total TV viewing time), basic requirements for democratic society (any contribution to being informed citizens; 'attitudes towards politics and current affairs,' 'level of information' and 'involvement'), social capital ('tolerance and respect for other people') and happiness (people's overall happiness) in 23 European countries from 2005 to 2008. As for social capital, various notions related to this have been proposed, and this study adopts the simple question of the importance of learning ‘tolerance and respect for other people’ by children, which has often been regarded as a major factor in social capital in past studies (Putnam, 2000). For happiness, a direct question on overall happiness is used. The variables and sources of the data are summarized in Table 1. These are generated by three reliable social surveys covering EU member states.
Table 1. Variables in the model.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Contents</th>
<th>Reference</th>
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</thead>
<tbody>
<tr>
<td>Share</td>
<td>Share of the PSB</td>
<td>European audiovisual observatory</td>
</tr>
<tr>
<td>C3</td>
<td>Share of the top three undertakings</td>
<td>European audiovisual observatory</td>
</tr>
<tr>
<td>TV viewing</td>
<td>'On an average weekday, how much time, in total, do you spend watching television?'</td>
<td>European Social Survey</td>
</tr>
<tr>
<td>Watching news, current affairs</td>
<td>'On an average weekday, how much of your time watching television is spent watching news or programs about politics and current affairs?'</td>
<td>European Social Survey</td>
</tr>
<tr>
<td>Attitudes towards politics and</td>
<td>'To what extent you tend to agree or disagree: I am interested in what is going on in politics and current affairs.'</td>
<td>Eurobarometer</td>
</tr>
<tr>
<td>current affairs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of information</td>
<td>'For each of the following statements, please tell me 'To what extent you tend to agree or disagree: I feel well informed about what is going on in politics and current affairs.'</td>
<td>Eurobarometer</td>
</tr>
<tr>
<td>Involvement</td>
<td>'To what extent you tend to agree or disagree - People should involve themselves more in politics and current affairs.'</td>
<td>Eurobarometer</td>
</tr>
<tr>
<td>Tolerance and respect for</td>
<td>'In a list of qualities that children might be encouraged to learn at home': 'How important you consider it to be' – Tolerance and respect for other people</td>
<td>Eurobarometer</td>
</tr>
<tr>
<td>other people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiness</td>
<td>'Taking all things together, how happy would you say you are?'</td>
<td>European social survey</td>
</tr>
</tbody>
</table>

These results and technical conditions are published openly and cited in various academic papers as reliable sources and suitable well for macro analysis (Halman and Luijkx, 2006). Their limitations are that most of these are cross-sectional data and panel data analysis cannot be applied and, as the timing of each survey is different, these might contain inherently the reverse causation. But this study uses these as pooled data and, by using the SEM, these limitations will be refrained.

To observe indirect effects, such as the level of multi-channel reception, broadband penetration and so forth, the following variables are added (all variables and their correlations are shown in Ichikawa et al. (2012): number of channels (European Audiovisual Observatory); broadband penetration (Eurostat); rate of use for online newspapers/news magazines; web radio/web television (Eurostat) which can substitute for television; cable households; satellite households (European Audiovisual Observatory), which represent the situation regarding the reception of pay-TV; the share of cultural consumption expenditure (Eurostat); and households (Eurostat). These variables will also be used for estimation.

Estimation

The structural equation is formulated as follows:

\[
\text{News/TV} = a_0 + a_1 \text{Share} + a_2 \text{C3} \\
\text{Attitudes} = b_0 + b_1 \text{News/TV} \\
\text{Information} = c_0 + c_1 \text{News/TV} \\
\text{Involvement} = d_0 + d_1 \text{News/TV} \\
\text{Tolerance} = e_0 + e_1 \text{News/TV} + e_2 \text{Attitudes} + e_3 \text{Information} + e_4 \text{Involvement} \\
\text{Happiness} = f_0 + f_1 \text{News/TV} + f_2 \text{Attitudes} + f_3 \text{Information} + f_4 \text{Involvement} + f_5 \text{Tolerance}
\]

In practice, we use the statistics software Stata to estimate the formulation based on the above variables. Technically, this paper uses structural equation modeling, which generally requires all the equations related to the system to be formulated. The variables that can never be
dependent variables in the system are expected to be exogenous, but the variables in this structural equation are affected by a large number of factors and thus are not exogenous. We therefore assume that the structural equations are not completely formulated in advance, and the endogeneity problem can be handled by ordinary instrumental variables estimation. As there are eight variables in the models, at least the same number of instrumental variables is required. In this model, the variables are selected as instruments such as “License fee or not” [nature of the funding (license fee or direct tax)], “Online Newspapers/News,” “Share of Cultural Consumption Expenditure,” “Broadband Penetration,” “Web radio/Web television,” “Channels,” “Cable Households,” “Satellite Households,” “Households,” and country dummies. In particular, country dummies can control for the unobserved heterogeneity among the countries which cannot be treated within the variables in the equations.

RESULTS

The result of the estimation is summarized in Figure 2. The scales of the coefficients are normalized. Although the number of exogenous variables is larger than that of endogenous variables; since the test for over-identifying restrictions is satisfied, there is no significant endogenous bias among the estimates.

Model test

The hypothesized model is examined here using the structural equation model (SEM) to identify the causal relationships between the factors.

A positive path was predicted from the effects of media policy, passing through viewing habits, leading to the acquisition of basic requirements, and finally to social capital and happiness. The results are as follows:

**Effects of media policy on the viewing habits of the audience**

The results show that the share of a PSB and C3 has a highly positive effect on the ratio of time spent watching news and current affairs programs to total TV viewing time. This reveals that media policy such as the presence of a PSB and the creation of entry barriers by a licensing system increases the share of the viewing time of news and current affairs. It can thus be said that these policies influence the incentive of the broadcasting companies to provide more news or current affairs contents and/or perform a positive function in preventing people from watching too many leisure-oriented programs. This rela-
tionship requires further scrutiny, but it is important that the effects on the demand-side are apparent.

Effects on some of the basic requirements of democracy as a result of the viewing habits of the audience

The ratio of time spent watching news and current affairs programs to total TV viewing time is positively related to factors regarding some of the basic requirements of democracy. The ‘level of information’ (feeling well-informed about politics and current affairs) and ‘attitudes towards politics and current affairs’ are highly influenced by this ratio, but attitudes towards ‘involvement’ in politics and current affairs are not affected by the ratio.

The results support the view that media policy has prevented a ‘race to the bottom,’ increased the percentage of news and current affairs program viewing, and has caused viewing habits to have something of a positive influence on some of the basic requirements of democracy. These justify state intervention in the media market as an aid to preparing a platform for democracy.

Effects on social capital

As for the normative theory, constitutional law scholars such as Sunstein (2001) indicated that the basic requirements for democracy, represented by the three variables in this study, should have positive relations with social capital.

This study reveals a positive relation between ‘involvement’ and social capital and, at the different level viewing ratio and social capital are positively correlated. This result appears to be partly consistent with the opinion that while TV viewing in general has a negative effect on social capital, watching news and current affairs programs has significant and positive effects on social capital (Putnam, 1995; Norris, 1996; Kataria and Regner, 2011). These results reveal the mixed effects of media policy, the ratio of time spent watching news and current affairs programs to total TV viewing time, and social capital.

Relationships to happiness

The ‘happiness’ index also provides deeper insights. As explained above, the measurement of subjective ‘happiness’ or ‘well-being’ has recently enabled us to evaluate variables which cannot be measured by traditional economic analysis. This index enables us to reflect on overall utility through subjective questionnaires.

In this study, relationships between the viewing ratio and happiness, and social capital and happiness are revealed. Concerning the three basic requirements for democracy, the ‘level of information’ is positively related. Accordingly, it can be said, for instance, that people feel happier when they feel well-informed about politics or current affairs.

DISCUSSION

This study attempts to analyze a normative media policy model, often advocated by legal academics, or the public sphere approach by using the SEM based on past interdisciplinary contributions.

As a result, although data are limited and we have relied upon a subjective questionnaire, media policy in Europe, such as the establishment of a certain size of public service broadcaster, some entry barriers and the maintenance of plurality (with the imposition of certain contents obligations) have played a positive role in providing some of the basic requirements for democracy, and in increasing social capital and happiness.

As a public corporation, the establishment of a PSB is often criticized for its x-inefficiency and paternalism (Peacock, 2004). Permitting concentration and allowing commercial broadcasters to operate under an agreement that certain standards will be maintained does not necessarily lead to an ideal situation. These are acceptable arguments, but various studies in the past have not verified the meaning of this in the total context of media policy.

The SEM has its own limitations, but this study includes exogenous variables and it has been possible to obtain a stable result. Nevertheless, the above analysis does depend on a traditional media policy model and focuses mainly on television. This selection itself has the possibility of distorting the results.

Under these limitations, the influence of television proves to be strong, but the emergence of the Internet or other new media services is not negligible. Therefore, the implications for future media policy will be pursued through paying more attention to relationships with broadband, online content or web TV, often termed ‘convergence.’

Recently, due to progress in the convergence of telecommunications and broadcasting, the debate over the reasoning behind media policy has returned (Sunstein, 2001; Tewksbury, 2005). Generally speaking, penetration of the Internet tends to be regarded as a threat to incumbent media companies, but our research (Ichikawa et al., 2012) shows that broadband penetration has a positive effect on the ratio of time spent watching news and current affairs programs to total TV viewing time, and the use of broadband services, for instance in viewing online newspapers or web TV, and the viewing ratio are also positively correlated (0.57, p<0.01; 0.45, p<0.01). These infrastructures and applications appear to substitute for television, but judging by the increase in the ratio, the conventional results appear to be positive,
although what causes this result is open to question. Compared to the main analysis in this study, the above observations are based on correlation analysis and no causal relationship is proved, nor is any attention paid to the relationship between medium and content. Nevertheless, there may be clues here for planning future media policy.

Conclusion

This study has examined the roles and functions of media policy by quantitative measures in a coherent and integrated way. This article sets up a hypothetical model which reveals multi-level functions of media policy and challenges the past qualitative and theoretical or patch-worked studies. The results of the analysis show that media policy, including establishing public service broadcasters and allowing, to some extent, a degree of concentration in the media industry, has a positive effect on the basic requirements of democracy, social capital, and people’s happiness.

This study deals with data from European countries with a public service broadcaster, but can be applied to other regions. For example, the US has few public service broadcasters, but the debate on media policy has returned there due to economic difficulties faced by newspapers, case laws defying the ease of ownership control, and a decline in local journalism due to the Internet (Copps, 2011). In Japan, the scope for public service broadcasting and its definition have been channeled toward a medium-neutral and function-based approach (Expert Committee on the Receiving Fee System in Japan, 2011).

The model in this study is traditional and focuses mainly on policies for television, but this article also observes and analyzes the challenge to this model by taking into account such issues as recent ICT policy, multi-channel policies, and penetration by the Internet. In addition, further study is required for a detailed examination under multi-layered regulations unlike the traditional broadcasting regulations. In this context, the structural equation model (SEM) is effective for integrating various factors and establishing a coherent model for acquiring important hints for the future policy making.

REFERENCES


Casanova F (2010). Media policies and regulatory practices in a selected set of European countries, the EU and the Council of Europe: The case of the European Union and the Council of Europe. mediamap.


