Ranking different barriers influencing on media privatization

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\section*{ABSTRACT}

For years, there have been growing interests on cost reduction for products and services. Privatization is considered as one of the most important techniques to increase relative efficiencies of publically held firms. In this paper, we present an empirical investigation to rank important barriers on privatization of television (TV) media industry in Iran. The proposed study of this paper designs and distributes a questionnaire using a sample of 234 out of 600 graduate students who were enrolled in media communication studies. The survey considers social, cultural, economic as well as rules and regulations factors influencing privatization of TV media industry. The survey uses the ranking method presented by Cook and Kress (1990) \cite{Cook, W. D., & Kress, M. (1990). A data envelopment model for aggregating preference rankings. \textit{Management Science}, 36(11), 1302-1310.}. The results of the investigation indicate rules and regulations are the most important barriers on privatization of Iranian TV followed by cultural, social and economic factors.

\section*{1. Introduction}

Media plays an essential role on connecting people and government, industry and society, it is an important segment of people's lives since many prefer to spend some important of their times on following news, entertainment, etc. Television media (TV) plays, on the other hand, an essential role for most governments to express their best interests. Privatization plays an essential role on cost reduction for TV media. However, privatization in this industry is not as easy as other ones since we need to apply appropriate action plans. Therefore, we require studying the impacts of privatization for similar cases in other countries. For years, many countries have launched extensive privatization programs and there has been a growing interest to learn on the effect of privatization on productive efficiency (Oktan, 2006).
Sprenger (2011) reported that the transformation of ownership of productive assets from state and private ownership had been one of the most important and, at the same time, most controversial issues of the transition of the former socialist economies to market economics. Privatization was started in the countries of central and Eastern Europe, the former Soviet Union and China to help enterprise restructure with the ultimate objective to improve the operating performance of enterprises. Many empirical studies have found positive influences of privatization on indicators of performance and restructuring on average.

However, the success of large-scale privatization in the transition process is still far from being uniform across various countries in terms of techniques, ownerships of privatized firms. Brown et al. (2006), for instance, reported that the impact of privatization on productivity was significant and positive in Hungary and Romania but, small or even negative in Ukraine and Russia. Only privatization by foreign investors had substantial and positive impacts in all four countries under investigation. Several studies also indicated that company outsiders. In addition, ownership concentration was found to be conducive to better performance in various studies (e.g., Hanousek et al., 2007). In US, public services outsourced to private providers sometimes ended up saving (Avant, 2005). Yarrow et al. (1986) studied the theoretical and empirical case for public against private ownership. Privatization usually assists managers put bigger emphasis on the pursuit of profits but various people argued whether this was an advantage for society depending on the trade-off between possible market failures, which occurs because of insufficient competition in government control of public firms. The competitive and regulatory environment are considered important in many industries. In competitive markets, private ownership receives more popularity but when there is a natural monopoly, some regulatory actions are also needed. There are some evidences implying that privatization have led to improved performance by firms such as the National Freight Corporation and Cable and Wireless which operate in a competitive environment. Privatization is also advanced as a tool to reduce trade union power, encouraging bigger share ownership, redistributing wealth and helping the public finances. However, there are other policy tools better suited for accessing appropriate objectives.

Hearn et al. (2009), for example, presented a comprehensive and in-depth academic overview of the application of action research techniques to the field of new media. Katz (2005) explained media policy for the 21st century in the United States and Western Europe. Servaes and Wang (1997) explained privatization and commercialization of the Western-European and South-East Asian broadcasting media. Nellis (1999) also discussed that we could reconsider privatization in transition economies. Karamanis (2003) in another survey studied the effect of culture and political institutions in media policy for the case of TV privatization in Greece. During the past few years, U.S. public television, an ostensibly noncommercial system constructed on public service principles, has been integrated into the commercial broadcasting sector.

Hoynes (2003) studied the new, market-oriented business practices within American public television, which focus the constructing of brand identity. Over the past few decades, the Public Broadcasting Service (PBS) has sought to extend its brand beyond broadcast television and cash in on consumer loyalty to PBS. This branding strategy selects an audience of consumers, and it offers both “content” and an image to these consumers. This is an important component of a broader strategy concentrated at leveraging the PBS brand to constructed new revenue streams by licensing the PBS logo, offering new forms of advertising, and developing several PBS brand name product lines. He investigated the consequences of the brand-building technique for the future of public service broadcasting. Kwak et al. (2002) executed a cross cultural study between the United States and South Korea by studying the effect of gender and compulsive buying tendencies in the cultivation impacts of TV show and TV advertising. Onwumechili (1996) also studied privatization on Nigerian media and explained the advantage and disadvantage of privatization on this industry.
2. The proposed method

The proposed study of this paper considers all graduate students who were enrolled in media and communication studies in Iran. Therefore, we use the following formula to calculate the minimum number of sample size,

\[
n = \frac{N \times z_{\alpha/2}^2 \times p \times q}{\varepsilon^2 \times (N - 1) + z_{\alpha/2}^2 \times p \times q},
\]

where \( N \) is the population size, \( p = 1 - q \) represents the yes/no categories, \( z_{\alpha/2} \) is CDF of normal distribution and finally \( \varepsilon \) is the error term. Since we have \( p = 0.5, z_{0.025} = 1.96 \) and \( N = 600 \), the number of sample size is calculated as \( n = 234 \). The proposed study of this paper studies the effects of privatization in terms of four different perspectives including cultural, social, economical as well as rules and regulations. Table 1 shows details of our findings on the votes given to each factor as follows,

### Table 1

<table>
<thead>
<tr>
<th>Barriers on privatization</th>
<th>Cultural</th>
<th>Social</th>
<th>Economical</th>
<th>Rules and regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>70</td>
<td>29</td>
<td>12</td>
<td>123</td>
</tr>
<tr>
<td>2</td>
<td>47</td>
<td>59</td>
<td>88</td>
<td>41</td>
</tr>
<tr>
<td>3</td>
<td>41</td>
<td>88</td>
<td>59</td>
<td>47</td>
</tr>
<tr>
<td>4</td>
<td>76</td>
<td>59</td>
<td>76</td>
<td>23</td>
</tr>
<tr>
<td>Sum</td>
<td>234</td>
<td>234</td>
<td>234</td>
<td>234</td>
</tr>
</tbody>
</table>

The proposed method of this paper uses a data envelopment model for aggregating preference rankings (Cook, & Kress, 1990). Let \( y_{rj} \) be the relative weight for each alternative given in Table 1. Let \( u_r \) be relative weight of each alternative, therefore we have,

\[
\max \sum_{r=1}^{s} u_r y_{r0}
\]

subject to

\[
\sum_{r=1}^{s} u_r y_{rj} \leq 1, \quad j = 1, \ldots, n
\]

\[
u_r - u_{r+1} - d(r, \varepsilon) \geq 0
\]

\[
u_r - d(r, \varepsilon) \geq 0
\]

For more details on this ranking model see Cook and Kress (1990). Next, we present details of our findings on applying Model (1).

3. The results

In this section, we present details of our investigation on ranking various barriers on privatizing Iranian TV broadcasting. Since there are four criteria, we need to solve model (1) four times.

3.1. The effect of cultural barriers

We first present the implementation of Model (1) by considering cultural factors in the objective function. The model is as follows,
max : \( Z = 70U_1 + 47U_2 + 41U_3 + 76U_4 \)
\[
\text{s.t.} \quad 70U_1 + 47U_2 + 41U_3 + 76U_4 \leq 1 \\
29U_1 + 59U_2 + 88U_3 + 59U_4 \leq 1 \\
12U_1 + 88U_2 + 59U_3 + 76U_4 \leq 1 \\
123U_1 + 44U_2 + 47U_3 + 23U_4 \leq 1 \\
U_1 - U_2 \geq \varepsilon \\
U_2 - U_3 \geq \varepsilon \\
U_3 - U_4 \geq \varepsilon \\
\varepsilon = 0.0001 \\
U_j \geq 0 
\]

The optimal solution of model (2) is equal to \( U_1 = 0.0044 \), \( U_2 = 0.0043 \), \( U_3 = 0.0042 \) and \( U_4 = 0.0041 \) with \( Z^* = 0.9847 \).

3.2. The effect of social barriers

Social barriers are considered as the second most important factors and the implementation of Model (1) by considering social factors in the objective function is equal to \( U_1 = 0.0044 \), \( U_2 = 0.0043 \), \( U_3 = 0.0042 \) and \( U_4 = 0.0041 \) with \( Z^* = 0.9836 \).

max : \( Z = 29U_1 + 59U_2 + 88U_3 + 59U_4 \)
\[
\text{s.t.} \quad 70U_1 + 47U_2 + 41U_3 + 76U_4 \leq 1 \\
29U_1 + 59U_2 + 88U_3 + 59U_4 \leq 1 \\
12U_1 + 88U_2 + 59U_3 + 76U_4 \leq 1 \\
123U_1 + 44U_2 + 47U_3 + 23U_4 \leq 1 \\
U_1 - U_2 \geq \varepsilon \\
U_2 - U_3 \geq \varepsilon \\
U_3 - U_4 \geq \varepsilon \\
\varepsilon = 0.0001 \\
U_j \geq 0 
\]

3.3. The effect of economical barriers

Economical barriers are considered as the third most important factors and the implementation of Model (1) by considering economical factors in the objective function is equal to \( U_1 = 0.0044 \), \( U_2 = 0.0043 \), \( U_3 = 0.0042 \) and \( U_4 = 0.0041 \) with \( Z^* = 0.9814 \).

max : \( Z = 12U_1 + 88U_2 + 59U_3 + 76U_4 \)
\[
\text{s.t.} \quad 70U_1 + 47U_2 + 41U_3 + 76U_4 \leq 1 \\
29U_1 + 59U_2 + 88U_3 + 59U_4 \leq 1 \\
12U_1 + 88U_2 + 59U_3 + 76U_4 \leq 1 \\
123U_1 + 44U_2 + 47U_3 + 23U_4 \leq 1 \\
U_1 - U_2 \geq \varepsilon \\
U_2 - U_3 \geq \varepsilon \\
U_3 - U_4 \geq \varepsilon \\
\varepsilon = 0.0001 \\
U_j \geq 0 
\]

3.4. The effect of rules and regulations

Rules and regulation barriers are considered as the fourth most important factors and the implementation of Model (1) by considering rules and regulation factors in the objective function is equal to \( U_1 = 0.0044 \), \( U_2 = 0.0043 \), \( U_3 = 0.0042 \) and \( U_4 = 0.0041 \) with \( Z^* = 1 \).
max : \[ Z = 12U_1 + 88U_2 + 59U_3 + 76U_4 \]

\[ S T : \quad 70U_1 + 47U_2 + 41U_3 + 76U_4 \leq 1 \]
\[ 29U_1 + 59U_2 + 88U_3 + 59U_4 \leq 1 \]
\[ 12U_1 + 88U_2 + 59U_3 + 76U_4 \leq 1 \]
\[ 123U_1 + 41U_2 + 47U_3 + 23U_4 \leq 1 \]
\[ U_1 - U_2 \geq \varepsilon \]
\[ U_2 - U_3 \geq \varepsilon \]
\[ U_3 - U_4 \geq \varepsilon \]
\[ \varepsilon = 0.0001 \]
\[ U_j \geq 0 \]

Table 2 summarizes the results of the implementation of model (1).

**Table 2**
The summary of ranking

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social</td>
<td>0.984</td>
<td>3</td>
</tr>
<tr>
<td>Cultural</td>
<td>0.985</td>
<td>2</td>
</tr>
<tr>
<td>Economical</td>
<td>0.981</td>
<td>4</td>
</tr>
<tr>
<td>Rules-regulation</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

As we can observe from the results of Table 2, rules and regulations are the most important barriers on privatization of Iranian TV followed by cultural, social and economical factors.

**4. Conclusion**

In this paper, we have presented an empirical investigation to rank social, cultural, economical and regulation based factors influencing on privatization on Iranian television broadcasting. The proposed study of this paper has applied a well known ranking technique developed by Cook an Kress (1990) and the results have indicated that and regulations are the most important barriers on privatization of Iranian TV followed by cultural, social and economical factors.

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**References**


