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## Diversity in the local radio and the recording industry in Greece

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### Abstract

This paper presents an exploratory study on content diversity in the local music radio and the recording industry in a small media market (Greece) analyzing the most heavily promoted output in a short period of time. It is the first study for the Greek case based on primary data and focuses on supplied diversity. A sample of 563 songs aired most often by 57 stations dispersed in 28 regions of the country is analyzed considering variety, balance, and disparity as properties of diversity. The Simpson's  $D$  index, the Lorenz curve, and the Gini coefficient, have been used. To compare with the repertoire promoted by the recording industry, the charts published by the Greek branch of the IFPI before, during, and after the broadcast period, were used. Analysis shows that although there is no significant correlation between the content promoted by the local music radio and the recording industry in terms of artists and albums, both media are very close in terms of lower diversity of genres, languages and countries represented in their repertoires. In this respect, a clear indication that various communities are inadequately served, was found. Nevertheless, diversity in the charts – i.e. in a far more concentrated industry – is larger. As this is an exploratory study, the limitations and the directions for future research are also discussed.

### Introduction and background

Content diversity is an important issue for media regulators, industry practitioners and theorists not only in terms of pluralism and democracy, but also in terms of market competition, innovation and development. This is why not only there are numerous academic studies and analyzes, but also relevant clauses in the legislation of most countries, including Greece, as well as in international treaties and conventions of supranational and international organizations. Despite the importance of this issue, however, to date there is no systematic research on the Greek case considering radio, especially after privatization in 1987. Some researchers (e.g. Vasilaki, Andriopoulou & Gazi, 2006) analyze the main stages in the development of radio content after privatization, based on secondary data. This paper presents the first ex-

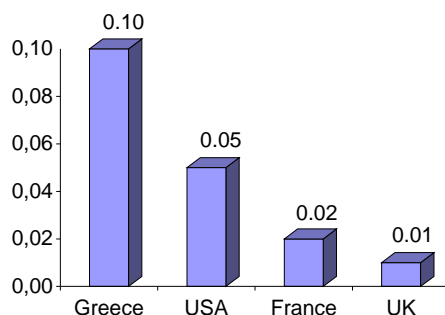
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ploratory study on diversity in the Greek local music radio based on primary data and on diversity measures developed in communication studies, in studies in the sociology of music and in studies on cultural diversity.

The Greek case is interesting, as it concerns a small market with minimum state intervention, maximum radio coverage, and a well developed recording industry. It is interesting also for reasons of comparison and experience gained due to several peculiarities. For example, regulations on private broadcasting in general and radio in particular, exist only on paper<sup>1</sup>. As a result, Greece represents a “laboratory” to study the politics of “laissez faire” and its effects on media content, especially concerning music. A second peculiarity is the very large number of radio stations compared to the size of the population. There are more than one thousand radio stations for a population of 10.5 million. Consequently, there is approximately one radio station per 10,000 inhabitants. This is a ratio of 0.10 and compared to some larger markets and other developed countries it is the highest, as shown in Figure 1 (based on data from: Federal Communications Commission, 2008 and European Journalism Center, 2008).

**Figure 1.** Ratios of radio stations to the population in selected countries (2008).



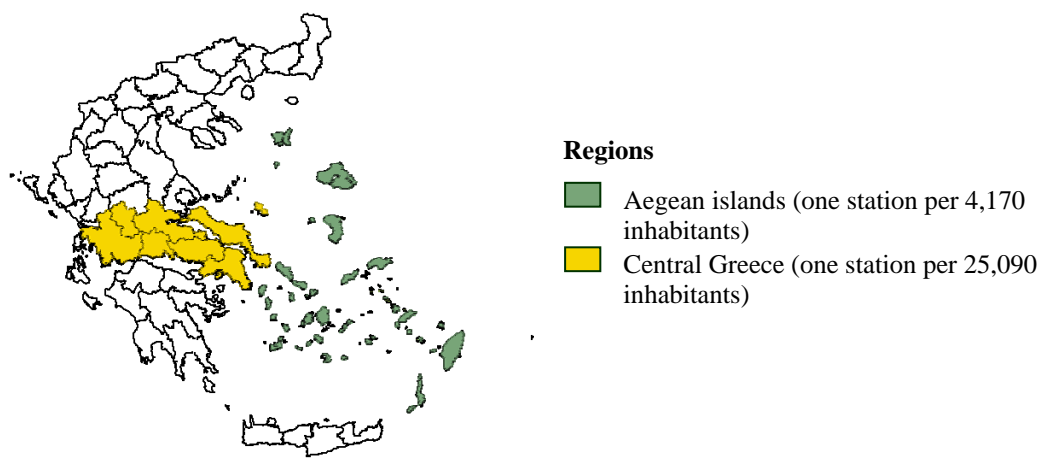
This ratio may be explained by the configuration of the ground, as Greece is an island country with many mountainous areas, but it can also be seen as a favorable condition for the development of perfect competition, for the advancement of diversity and the increase of *narrowcasting* to service niche cultural interests. Another peculiarity is the great dispersion and diversity of ratios across the country: while in central Greece there is one radio station per 25,090 inhabitants (0.04), this ratio climbs to one station per 4,170 inhabitants (0.24) in the Aegean islands, as shown in Figure 2. As the legislation on the non-informative content is very general and vague<sup>2</sup> (cf. Laws 2328/1995, 3592/2007 and Presidential Decree 235/2003),

<sup>1</sup> It is noteworthy that 30 years after privatization there is not a single legally operating commercial radio station. All stations (1,050) operate under a temporary license and they pay nothing for using the frequencies. In fact, this is a policy of charging the taxpayers with part of the operating costs of the private radio stations.

<sup>2</sup> Actually, it confuses quality with diversity and diversity with volume, and it does not set guidelines to achieve

and the controlling authority is powerless, especially outside the two major urban centers, the market is left to regulate the content of the music radio. It should also be added that the local production of music is well developed. For the period 1995-2006, the average of releases per year was 1,162.5 and – according to the Hellenic Society for the Protection of Intellectual Property (AEPI) – by 2005 the total turnover from sales abroad was €6,775,845,567<sup>3</sup>.

**Figure 2.** Maximum and minimum ratios of radio stations in Greece.



The large ratio of the radio stations to the population, the well-developed recording industry and production of music, the ease of setting up a radio station and operating it, the absence of interference with the cultural content, the inability to monitor compliance with the rules of operation, and the domination of domestic repertoire, describe briefly some of the main features of the music “radioscape” in Greece. In addition, considering the music radio, audience research, as well as research on content providers, the programming practices, and content diversity, is underdeveloped. This paper analyses diversity in these conditions, considering also the symbiotic relationship between radio and the recording industry. As an exploratory study, it focuses on the repertoire promoted most by both media.

## **Operationalization, measures, and indices of diversity**

The variety of topics analyzed in a large number of relevant publications, shows that the significance of diversity is multidimensional, as it is the term itself. It is at the same time political, cultural, and economic. Many publications discuss and present research on the identifi-

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an acceptable methodology on assessing quality or measuring diversity – probably due to the lack of a clear strategic target for cultural development. While emphasizing on volume, this legislation neglects important aspects of diversity, like balance and disparity.

<sup>3</sup> Approximately 3% of the GDP, this amount exceeds the public spending on education for that year (5.5 billion Euros).

cation and measurement of diversity in television (e.g. Hellman, 2001), radio (e.g. Glasser, 1984; Lee, 2004) and – of course – in the recording industry, starting with the well-known research by Peterson and Berger during the '70s that associates the structure of the market with the diversity of output (Peterson & Berger, 1975). Since then, and for more than thirty years now, there has been a lot of relevant research from a variety of perspectives, concerning mainly the recording industry and to a lesser extent the music radio. Almost all this research focuses on the structure of the markets and analyzes whether and in what conditions concentration affects diversity. Several methods were also developed to analyze and study diversity in music for the purposes of the academic research and media policy (e.g. Burnett, 1992; Christianen, 1995; Dowd, 2004; Lopes, 1992; Rothenbuhler & Dimmick, 1982).

According to van Cuilenburg (2002), two main approaches may be distinguished concerning diversity in the media: the American, based on the concept about the freedom of expression and the European, based on the concept about pluralism. By the American approach, the principle of the freedom of expression resulted in a system based on the needs of the broadcasters. The access of citizens to diverse content (i.e. *exposure diversity*) is regarded as a consequence of the competition among as many as possible different sources supplying diverse content; therefore, legislators focus on competition and antitrust regulation (Hoffmann-Riem, 1987; van Cuilenburg, 2002). This approach is also called the *marketplace model* (Glasser, 1984; Hoffmann-Riem, 1987; Hellman, 2001). Following it, Napoli (1999) analyzes diversity in the context of the concept about the “marketplace of ideas” and suggests an operationalization as shown in Table 1, where the main dimensions or components of diversity in the mass media are *source*, *content*, and *exposure*.

**Table 1.** Operationalization of diversity according to Napoli (1999).

Source Diversity	Content Diversity	Exposure Diversity <sup>4</sup>
1. Ownership	1. Program-Type Format	1. Horizontal
a. Programming	2. Demographic	2. Vertical
b. Outlet	3. Idea/Viewpoint	
2. Workforce		

In terms of the European approach – called also the *public policy model* (Hellman, 2001) – the point of reference is the recipient. Its basic principle, safeguarded by the State, is to provide content as diverse as possible and accessible for all audiences and enable equal access of

<sup>4</sup> While the term *horizontal diversity* refers to the diversity across all available channels, the term *vertical diversity* refers to the diversity within individual channels.

the various voices to the political *and cultural* public sphere<sup>5</sup>. It is upon this principle that broadcasting systems have been developed, while broadcast programs are considered cultural goods important for the functioning of democracy (Hoffmann-Riem, 1987). Based on this analysis, McQuail (1992) elaborates on the four main dimensions of diversity suggested by Hoffmann-Riem (1987): *formats and issues, content, people and groups, and geographical coverage*. In other words, information and education as well as entertainment (diversity of formats and issues), opportunities for the various social groups to voice their different opinions (diversity of content), catering to the interests of all parts of the community (person and group diversity), and content of local, regional, national and supranational interest (geographical diversity), compose the dimensions of diversity in the media.

Both approaches identify diversity as a multidimensional concept and recognize content as one of its dimensions. However, it can easily be seen that both perspectives actually describe models for assessing media diversity on a *systemic* level, i.e. in a media system altogether, and their focus is any non-musical content. To study diversity of a particular type of content (in this case music), adaptation, refinement, and further definition of specific measures are required. Depending on the level and the scope of the analysis, there are different perspectives for the operationalization of diversity. Ranaivoson (2007) proposed the operationalization of the construct shown in Table 2. She uses as an example the recording industry, aiming to suggest a robust set of indices assessing the diversity of cultural expressions – an issue that is in the heart of the cultural policy pursued by UNESCO (Stenou, 2004; UNESCO, 2001; UNESCO, 2005).

**Table 2.** Operationalization of diversity in the recording industry (Ranaivoson, 2007).

<b>Producer/Distributor</b>	<b>Product</b>	<b>Consumer</b>
Artist	Lyrics	Individuals
Publisher	Music	Groups
Producer		
Distributor		
Retail outlet		
Broadcaster		

The aspects of diversity shown in Table 2, consider the distinction between *supplied* and *consumed* diversity (cf. McQuail, 1992; Napoli, 1999; van Cuilenburg, 2002). To cope with

<sup>5</sup> On the expanded concept of the cultural public sphere that includes “the whole range of media and popular culture”, see McGuigan, 2005.

market uncertainties and maximize the chances of success, the cultural industries adopt the strategy of overproduction, i.e. given certain conditions, they tend to produce the widest possible range of products (Benhamou & Peltier, 2007; Caves 2000; Hesmondhalgh 2007). Because not everything produced is consumed as well, however, researchers make a distinction between *supplied* and *consumed* diversity (cf. Benhamou & Peltier, 2007; Ranaivoson, 2007).

As this paper focuses on *supplied* diversity, it analyzes the diversity of music that is aired most often by the local radio stations and compares it to the recorded music ordered most often by distributors and retailers<sup>6</sup>. Therefore, not all measures presented in Table 2 are relevant. It should also be noted that the analysis of diversity in terms of the lyrics, as well as in terms of the music characteristics (e.g. rhythm, harmonic structure, melody etc.), exceeds the scope of this paper. Based on the operationalization suggested by Ranaivoson (2007) for the recording industry and by Benhamou & Peltier (2007) who studied the case of the French publishing industry, the measures taken into consideration include the artists' countries of origin and the languages heard in the songs, the recording *companies* (*not* the labels), the music genres (or styles), and the artists. For reasons of comparability between the radio repertoire and the IFPI charts, albums and singles are also considered. Moreover, 99.3% of the most often aired songs in the sample, are from albums or singles. 90% of these are from albums and only 10% are from singles. Evidently, these measures reflect some aspects of the two systemic models described above (e.g. the workforce and the ownership in Napoli's model).

Mcdonald and Dimmick (2003) explain that the number of categories (types, genres, classes, etc.) included in any measure, represents only one aspect of diversity. The relative proportions of the categories, or the evenness of distribution across all categories or types, is a second aspect that should not be neglected. From this point of view, they analyze 12 indices of diversity and suggest some criteria to decide upon which one to use, depending on the aims of the research. The literature on measuring content and cultural diversity suggests that *variety* (the number of categories or items), *balance* (evenness of distribution), and *disparity* (the degree to which the categories or items differ from each other) are the three aspects, properties, or dimensions of diversity (Benhamou & Peltier, 2007; Ranaivoson, 2007). For the purposes of this paper, the Simpson's *D* diversity index was used, because of its interpretability (it ranges between zero and unity) and because it considers both variety and balance (Mcdonald & Dimmick, 2003). It is also related to the Herfindahl-Hirschman index (*HHI*) known in media economics. The index equals the probability that two entities or items randomly se-

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<sup>6</sup> Data on the most often ordered albums are published in the charts by the Greek branch of the IFPI. Unlike other cases, in Greece the IFPI charts refer to orders and not to sales.

lected from a sample will be different and it is calculated by subtracting from unity the sum of the squared proportions of the entities or items in the total number of observations:

$$D = 1 - \sum_{i=1}^n p_i^2$$

**Note:**  $p_i$  is the proportion of the  $i$ th category or type and  $i=1$  through  $n$  is the number of categories, types or items in the sample.

This index, however, does not allow to easy understand the balance of the distribution, although it includes this information. To illustrate in a better and clearer way the balance, as well as the comparison between the selected measures of diversity in music radio and the recording industry, the Lorenz curve and the Gini coefficient  $G$  have been used. The Lorenz curve represents graphically the cumulative distribution of a size (e.g. income) to a finite set of items (e.g. the population). Here, it represents the cumulative distribution of the available positions in a table (e.g. the IFPI charts) to a finite set of artists, languages, countries, etc. The Gini coefficient is a measure of inequality based on the Lorenz curve. It is used here as a measure for the balance of the distribution of the available positions in the tables with the most promoted output to the artists, languages, etc. The Lorenz curve and the Gini coefficient are both used in the study of diversity (see Patil & Taillie, 1982).

Apart from assessing diversity in the repertoires promoted by the local music radio and the recording industry, the hypothesis that there is some correlation between them, was also tested.

## **The research and the results**

Diversity in the Greek local music radio was examined in a sample of songs aired by 57 local stations dispersed in 28 prefectures (out of 51). To collect the data, an e-mail was sent to 546 radio stations (of about 1,050). The rate of response was about 10%. Respondents were asked to complete a list with the titles and the artists or music groups of the ten songs they broadcasted more often during the period October 27 – November 9, 2008. Music producers in Greece call the list with the more often aired songs a “*power-list*”. The same terminology will be used in the rest of the paper.

A table was created with 570 rows (57 radio stations x 10 songs per station) including for each item the song title, the genre, the artist or group, the country of origin of the artist or group, the recording company, the language of the song, and the respective album or single. The classification of the songs into genres was based on relevant information provided by the recording industry on each release. Information on genres was also based on previous research that established 24 music genres, known to a public 17-33 years old (Baltzis &

Gardikiotis, 2008). To calculate measures on both aspects of diversity (number of classes and degree of evenness of the apportionment – McDonald & Dimmick, 2003), several tables were extracted from the initial one.

The above data were compared to the set of albums and singles in the charts of the Greek branch of the IFPI for the period October 11 – November 28, 2008, including both local and international repertoire. It should be noted that in Greece, the IFPI charts are published weekly and include the albums and singles that are most ordered by distributors and retailers. This way, they serve only as an indirect indicator of demand, but for the recording industry they are an important instrument of distribution policy and promotion.

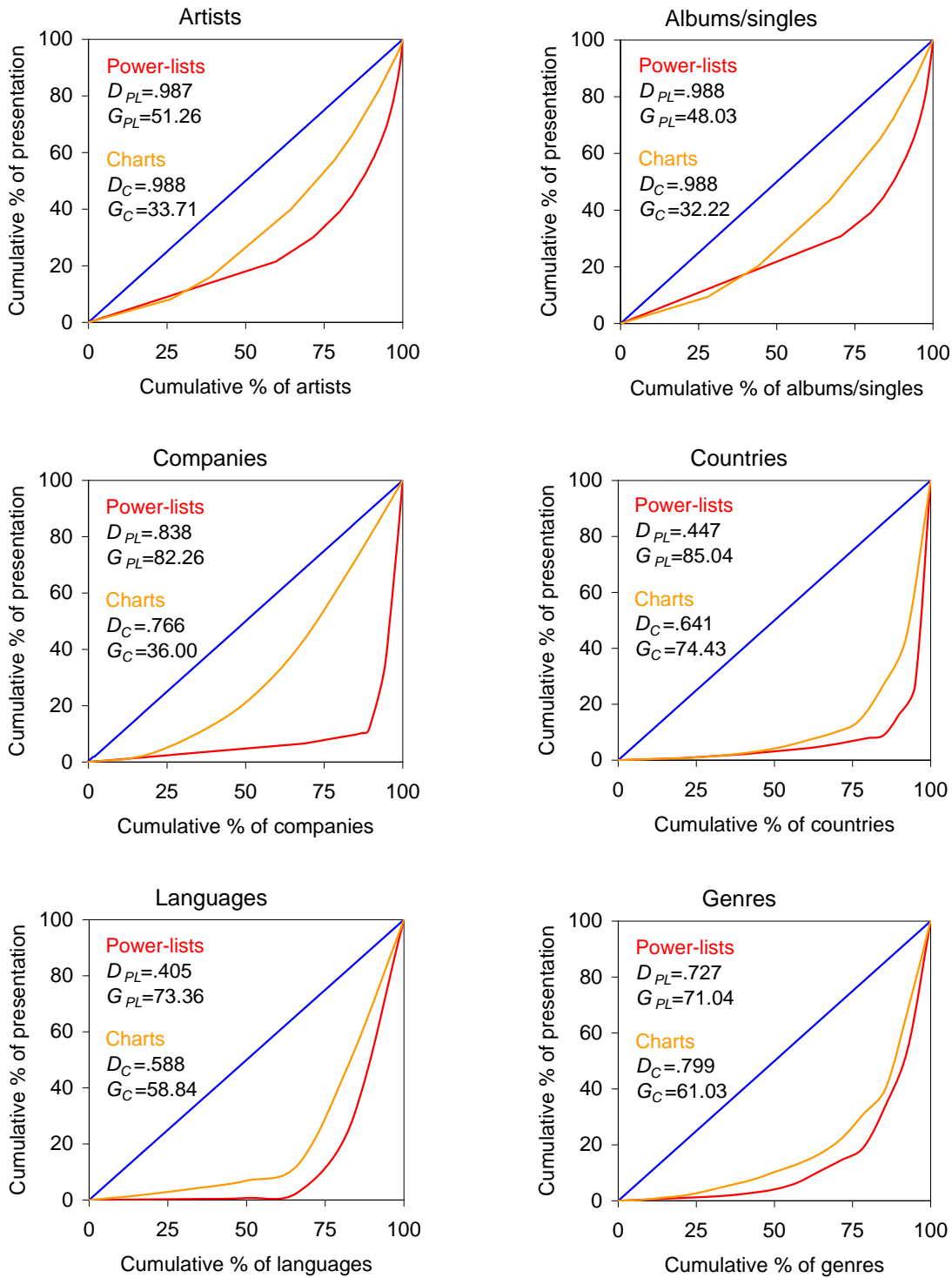
For both samples the Simpson's  $D$  index, the Lorenz curves and the Gini coefficient  $G$  were calculated on the selected measures of diversity: origin of the artists or groups by country, recording companies (not labels), languages, music genres, individual artists or groups, and albums or singles. The results can be seen in Figure 3, where the blue line is the line of equality, the red line is the Lorenz curve for the power-lists, and the orange line is the Lorenz curve for the IFPI charts. In the rest of the paper,  $D$  and  $G$  are denoted as  $D_{PL}$  and  $G_{PL}$  for the power-lists, and  $D_C$  and  $G_C$  for the IFPI charts respectively.

In the charts table there are 118 artists or groups appearing in 350 rows (7 weeks x 50 rows per week), while in the power-lists there are 228 artists/groups appearing in 563 rows (57 stations x 10 rows minus 7 missing answers). In other words, the relative variety of artists is larger in the power-lists (0.40) compared to the charts (0.34). However, the presentation of artists in the IFPI charts is more balanced, as shown also by the Lorenz curves (Figure 3). The top quartile of the artists shares 47% of the positions in the charts, while in the power-lists this share is 66%. Also, the  $G_C$  index is lower ( $G_C=33.71$ ,  $G_{PL}=51.26$ ) and the  $D$  index of diversity is slightly higher in the charts ( $D_C=.988$ ,  $D_{PL}=.987$ ). 19% of the artists in the power-lists appear also in the IFPI charts, before, during or after the period analyzed, while 37% of the artists in the charts appear also in the power-lists. To decide whether to proceed with more tests, the correlation coefficient *Spearman's Rho* was examined for the artists appearing in both samples and it was not found statistically significant ( $p>0.05$ ).

The diversity of albums and singles is the same in the IFPI charts and the power-lists ( $D_C=D_{PL}=.988$ ), however the repertoire in the charts is better balanced ( $G_C=32.22$  and  $G_{PL}=48.03$ ). As the Lorenz curves show, there is a set of albums and singles that is overrepresented in the radio power-lists. There are 118 albums and singles appearing in the 350 positions of the IFPI charts (0.34), while in the radio power-lists there are 245 albums and singles appearing in 563 positions (0.44).



**Figure 3.** Lorenz curves with indices  $D_{PL}$ ,  $G_{PL}$ ,  $D_C$ , and  $G_C$ .



Again, the relative variety is larger in the power-lists, but the balance in the charts is better: the top quartile of the albums in the power-lists share 65% of the available positions, while in the charts it accounts for 46%. Some artists and albums are more heavily promoted through the power-lists. 13% of the albums in the power-lists appear also in the IFPI charts, before, during or after the period analyzed, while 27% of the albums in the charts appear also

in the power-lists. To decide whether to proceed with more tests, the correlation coefficient *Spearman's Rho* was examined for the albums appearing in both samples and it was found statistically insignificant ( $p > 0.05$ )

Considering ownership (publishers or producers, according to Ranaivoson's model), diversity is larger in the power-lists. There are 52 companies appearing in 563 rows (0.09) and the  $D$  index is  $D_{PL} = .838$ , while in the charts there are only 6 companies appearing in 350 rows (0.01) and the  $D$  index is  $D_C = .766$ . However, the presentation of the different companies is still more balanced in the IFPI charts compared with the radio power-lists ( $G_C = 36.00$ ,  $G_{PL} = 82.26$ ). The top quartile of the companies in the IFPI charts share 59% of the total presentation (available positions), while in the radio power-lists it accounts for 92%.

The diversity of languages and the artists' countries of origin (as well as the diversity of genres) is an indicator for cultural diversity at large. As can be seen in Figure 3, the diversity of countries and languages is lower in both samples compared with the measures above ( $D_{PL} = .447$  and  $D_C = .641$  for the countries,  $D_{PL} = .405$  and  $D_C = .588$  for the languages). Although more countries appear in the power-lists, the relative variety is the same in both samples (0.04). They are also very close concerning the languages (0.01 and 0.02 respectively). Again, the charts are better balanced in terms of countries and languages ( $G_C = 74.43$  and  $G_{PL} = 85.04$  for the countries,  $G_C = 58.84$  and  $G_{PL} = 73.36$  for the languages). The top quartile of the countries in the power-lists (5 countries) accounts for 93%, while in the charts (3 countries) it shares 86%. UK, USA and of course Greece are overrepresented in both samples. As it is expected, Greek and English are the most represented languages (in that order). They both share 99% in the power-lists and 90% in the charts.

Finally, considering the genres or styles, the Simpson's  $D$  index is  $D_C = .799$  and  $D_{PL} = .727$ . Again, although the number of genres is not very different between the two samples (14 in the power-lists and 15 in the charts), the balance is still better in the charts ( $G_C = 63.56$ ,  $G_{PL} = 71.04$ ). It should be noted, also, that there are several genres that do not appear at all in any of the two samples, like blues, classical music and others. While the top quartile of the genres accounts for 85% in the power-lists, in the charts it accounts for 78%. In both samples, it should be considered that rock and pop music (both in Greek and in English) are overrepresented. However, in the IFPI charts, the Greek *laika* and the Greek art-popular music<sup>7</sup> appear more frequently.

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<sup>7</sup> For a short description of these genres, see Baltzis & Gardikiotis, 2008 (pp. 8-9).

## Conclusions – limitations – future research

The results of this exploratory research on diversity in the local music radio show that a high ratio of stations to the population and a loose regulatory framework (that is a policy of “laissez faire”) do not necessarily guarantee higher levels of supplied diversity and a wider range of available choices. Although it cannot be said that the level of diversity in the music radio is alarmingly low, given the conditions it is surprisingly lower compared with that of the recording industry. Future research might analyze further this indication. It is noteworthy that the average diversity index of the selected measures for the music radio is  $D_{PL}=.732$  and the average coefficient  $G_{PL}=68.50$ . Compared with the recording industry (average  $D_C=.795$ ,  $G_C=49.79$ ), the repertoire most promoted by the music radio in the Greek periphery is less diverse and less balanced. It is interesting that between the two media, the less concentrated one promotes less diversity.

As can be seen in Figure 3, the measures of artist and album diversity inflate the  $D$  index and decrease the coefficient  $G$ . On the level of individual artists, songs and albums it is expected diversity to be higher. However, on the level of companies, genres, languages and countries, the average levels of diversity in both samples are rather medium (average  $D_{PL}=.604$ ,  $D_C=.699$ ) and the distributions are less balanced (average  $G_{PL}=77.93$ ,  $G_C=58.21$ ). Still, the most promoted repertoire by the recording industry is more diverse compared with that of radio. The results suggest that even though the Greek “radioscape” is favorable to competition, the local music radio does not follow a strategy of promoting repertoire diversification that might service niche interests. Because genres, languages and countries are associated with diverse musical cultures, these measures are more important cultural indicators compared with the measures of individual artists and albums. In this respect, both the recording industry and local radio do not seem to give access to a wider range of cultural voices. In a multicultural society, like the Greek one, this is a clear indication that various communities are inadequately served. Future research might study further this finding which is interesting also from a political point of view.

The hypothesis that there is a correlation between the content of the music radio and the IFPI charts was not confirmed in terms of the artists and the albums. Despite the symbiotic relationship between radio and the recording industry, the local music radio in Greece seems to determine independently the repertoire in these respects. A direct relation between artists included in the power-lists and the artists in the charts was not established and contradictory indications were found. There are artists that appear in the charts before or during the broad-

cast period several times, but they are not included in the power-lists. There are also artists that appear in the charts before the broadcast period and they are included in the power-lists several times, but they do not appear in the charts after the broadcast period. There is an interesting case of a group that appears in the charts before and after the broadcast period twice, and three times during that period, while it is included only once in the power-lists. In a future research it would be interesting to study further these results with larger samples, although in this small sample of power-lists more than half of the regions are represented. It seems that for the artists and the albums the Greek local radio operates as an independent “gatekeeper” rather than as an industry conduit. A longitudinal analysis is needed, however, to understand the dynamics of diversity in both media and several aspects of their relationship, as well as the factors that may have some influence on it.

Considering the limitations of this study, future research would be interesting to make a comparison with the repertoire of the central music radio stations established in Athens – the major urban center of the country (approximately 30% of the population). A comparison among individual power-lists as well as a comparison among different regions, might also reveal further details about diversity in the local music radio. It would also be interesting to compare diversity in the local and the foreign repertoire and to include an analysis of the lyrics as well. Further elaboration on the differences between genres is needed to refine this measure and it is necessary to include innovation as an indicator for the dynamics of diversity as well as an analysis of the factors that may have some influence on it. Finally, a comparative analysis with other countries will help to better understand the conditions that are more favorable or prevent the development of diversity, which is important in terms of the media and cultural policy.

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