ARE MODERN AND CLASSICAL MUSIC LISTENERS THE SAME PEOPLE?

Doc. 174/99

Juan Prieto-Rodríguez
Victor Fernández-Blanco
ARE MODERN AND CLASSICAL MUSIC LISTENERS THE SAME PEOPLE?

Juan Prieto-Rodríguez
Víctor Fernández-Blanco
(Universidad de Oviedo - Spain)
ARE MODERN AND CLASSICAL MUSIC LISTENERS THE SAME PEOPLE?
Victor Fernández-Blanco *
Juan Prieto-Rodríguez
(Universidad de Oviedo - Spain)

ABSTRACT

In this paper we propose a method to analyse the differences between the consumption of modern and classical music, that we apply to Spain. Using the information contained in the Survey of Structure, Conscience and Biography of Class, we estimate a bivariate probit model to characterise the audience of each kind of music, we quantify the influence exerted by various socioeconomic features on the demands for these goods and we describe the average profile of their consumers. Besides, we test the independence on the consumption of these kinds of music is tested.

Key words: classical and modern music, audiences, consumer preferences, bivariate probit models.
INTRODUCTION

Studies related to audiences of performing arts in general, and classical music in particular, are very common in cultural economics and we can date their origins on Baumol and Bowen's seminal book published in 1966. However, this kind of study is quite uncommon in relation to modern music and papers that display in-depth comparisons between the audiences of both types of are scarce. Our paper deals with these aspects with reference to Spanish experiences. We begin by displaying the most important socioeconomic features of classical and modern music audiences. We then test the hypothesis of the presence of correlation between both audiences, that is to say, whether or not the fans of one type of music are interested in the other type.

To achieve this task we use a bivariate probit model. This model has an important advantage: it allows us to estimate simultaneously two equations that represent two decisions and to discover if there is a significant correlation between their random disturbances. In our case, therefore, we can identify the principal features of classical and modern music listeners, find if there are common characteristics and discover how similar they are. The data used to estimate this model comes from the Structure, Conscience and Biography of Class (ECBC-91). This survey combines information about individual consumption of cultural goods -including classical and modern music- with various social, demographic and economic variables of the interviewees.

MUSIC AUDIENCES: SOME INTERNATIONAL EXPERIENCES

In every market, knowing something about the profile of those who are potential consumers of a commodity is vital information for producers and also for public agencies that could participate in it. In this sense, culture is not different from any other market and, beginning with Baumol and Bowen's (1966) book, there are many papers that describe the principal
characteristics of performing arts audiences in different countries. We now present a brief outline of those studies that are concerned with classical and/or modern music audiences, which will provide a good point of reference with which to compare our results on Spanish audiences.

For presentational purposes, we group these international studies into two categories. Firstly, we review those papers based purely on classical music. Secondly, we focus our attention on studies that, with different levels of intensity, combine and compare classical and modern music audiences.

The first category begins with Baumol and Bowen's (1966) book. In a general analysis of performing arts, these authors describe the profile of attenders of classical music concerts and find that this audience is basically composed of middle-aged people (the average age is 39), professionals, managers and white collar workers, with high educational and income levels. Throsby and Withers (1979) confirmed these general characteristics in American and Australian audiences, finding, moreover, that the former has a younger profile than the latter.

Abbé-Decarroux and Grin (1992) analyzed the audience of classical music in Switzerland. Their conclusions are, in general, in agreement with those obtained in Baumol and Bowen (1966) and Throsby and Withers (1979). We would like to remark that the methodology of our paper is quite similar to that used by Abbé-Decarroux and Grin (1992). These authors estimated a logit model that allowed them to calculate the effect of some important variables on classical music demand. With this technique they found that "in the case of opera and concerts the older the individual, the higher the likelihood of his attending this kind of performance" (Abbé-Decarroux and Grin, 1992, p. 138). They also detected the presence of positive and statistically significant relationships between concerts attendance and income, studies in music or drama and previous exposure to live arts. These last results can be considered a new qualitative advance in audience
behaviour, because they are an empirical test of the relevance of the learning process in the consumption of classical music.

As we have noted, there are other studies which analyse classical and modern music consumers simultaneously. Towse (1994) studies the effects of employment and qualifications, the latter being a variable that the author uses as a proxy of the social class. She verifies that professionals, managers and administrators (which she associates with upper and/or middle class) are especially attracted by classical music, while skilled and unskilled workers, pensioners, unemployed and widows (lower middle and lower class) are attracted by modern or popular music (rock, folk, country, western, reggae).

O'Hagan (1996) looks at the influence of educational level on music concert attendance and on the TV audience of music in the USA and Ireland. In the USA he finds, again, that real attendance, desired attendance and TV audience grow with educational level. The analysis of the Irish case is more complex. The author defines three categories. First, “Hiart” which includes concerts, opera, plays and musicals; second, “Trad”, including traditional folk dance/music and country and western music; and third, “Pop” which refers to film and rock/pop/jazz music. O'Hagan’s main results are, firstly that “Pop” is the category most attractive in terms of attendance at events and in terms of TV audience; secondly, he finds that educational level has a positive effect on consumption of every cultural commodity; and thirdly, that this effect is higher on “Hiart”, where classical music is incorporated.

Finally, we refer Kurabayashi and Ito’s (1992) contribution in which we can find an attempt to address an issue similar the one that adds interest to our paper: to check if classical music and modern music audiences are really different. These authors describe some important socioeconomic characteristics of audiences of symphony concerts in Tokyo and in Japan.
generally. They conclude that, in Tokyo, "the centre of gravity of the demographic structure of the orchestra audiences, as a general rule, has gradually shifted in the past decade towards those who are aged 40 and over" (Kurabayashi and Ito, 1992, p.280). They find that there is something of a prevalence of people with high-income levels that are professional and manager workers. So, Kurabayashi and Ito say that, in the case of Tokyo "the audiences (...) belong to occupations which constitute the highest social stratum" (Kurabayashi and Ito, 1992, p. 281), although the presence of students is also notable.

The authors try to discover who are the audiences and if there are correlations among classical music, Japanese popular melodies, popular music of traditional type (jazz, swing, folk, country, western,...) and popular music in the modern fashion (blues, rock and roll, soul music, "pop" songs, etc.). They find that the popular music audience is basically made up of teenage and younger adult groups, whereas classical and Japanese music audiences belong to older age groups. There are also significant differences revealed when they consider people's occupation: manual workers and proprietors are more interested in Japanese music while administrative and professional workers tend towards classical and light music. The authors connect these differences with the presence of a process of taste formation: "the different tastes (...) might be explained by the difference in academic attainment and cultural background, when we recognise that those who belong to administrative and professional occupations have higher academic achievement and/or are strongly influenced by their intellectual or cultural heritage" (Kurabayashi and Ito, 1992, p. 279).

Finally, Kurabayashi and Ito try to discover the correlation of preference between types of music and they find a negative correlation between the two groupings of popular music and Japanese music, for both sexes, and classical music for males.
We now analyse the presence of such correlation between classical and modern music audiences in Spain. We begin by discussing our data source and the principal figures of music audience in our country.

THE STRUCTURE, CONSCIENCE AND CLASS BIOGRAPHY SURVEY AND THE MUSIC AUDIENCE IN SPAIN.

In this Section we offer the general figures of classic and modern music audition in Spain, using the information given by the Structure, Conscience and Class Biography Survey (ECBC-91).

The ECBC-91 was conducted between December of 1990 and March of 1991 using a sample of 6632 people over eighteen years old. It is the only source that combines cultural and socioeconomic variables for the Spanish economy and it has two differentiated parts. The first group of questions gives us information about socioeconomic characteristics of the individuals such as age, marital status, level of studies, family income and labour experience. The second part is an opinion survey on different topics including usage and habits of leisure time, cultural goods consumption and audience of classic and modern music.4

Although at the time we did this paper the ECBC was the only published source that includes cultural and socioeconomic variables for the Spanish economy, it has some important deficiencies, especially in the case of music audiences. First, it considers listening to music but it does not make a distinction between the different ways of listening to music and we cannot make an isolated study of the attendance at live musical events. Second, it does not define the concept of modern music, so we can not distinguish between pop, rock, jazz or popular (traditional) music. However, this Survey has an important advantage therefore: it allows us to combine these
two parts and to identify the main socioeconomic characteristics relevant to the demand for these goods.

Table I

CLASSICAL AND MODERN MUSIC AUDITION IN SPAIN

(Percentages)

<table>
<thead>
<tr>
<th></th>
<th>Listening to Classical Music</th>
<th>Listening to Modern Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>38.2</td>
<td>20.9</td>
</tr>
<tr>
<td>Annually</td>
<td>21.1</td>
<td>13.4</td>
</tr>
<tr>
<td>Monthly</td>
<td>15.9</td>
<td>15.6</td>
</tr>
<tr>
<td>Weekly</td>
<td>14.1</td>
<td>20.8</td>
</tr>
<tr>
<td>Daily</td>
<td>8.8</td>
<td>27.7</td>
</tr>
<tr>
<td>Others(^a)</td>
<td>1.8</td>
<td>1.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: ECBC-91

\(^a\)In this category we include people that do not answer or do so erroneously

In the ECBC-91 survey each individual is asked how often he or she listens to modern and classical music. The interviewee could choose among five alternative answers: never, annually, monthly, weekly or daily. Table I shows the frequencies of listening to music in Spain, and we can observer clear differences: 40% of the interviewees say that they never listen to classical music, but this percentage falls to 21% in the case of modern music. On the opposite side, about 10% of the interviewees say that they listen to classical music daily, while the percentage corresponding to modern music adds up to approximately 50%. If we define as fans those people who listen to music at least once a week, we can say that about a half of the interviewees can be considered modern music followers and that only a quarter of them are classical music fans.
Next, we present the most important characteristics of these two types of fans and analyse whether these two groups are different or whether people who are fans of one kind of music also listen the other kind. Prior to this, however, we present a theoretical model that enables us to understand the behaviour of cultural consumers, the empirical specification of the model, and the variables that can be included in it.

LISTENING TO MUSIC: THEORETICAL APPROACH AND EMPIRICAL SPECIFICATION.

To describe the behaviour of the music listeners we follow the Lévy-Garboua and Montmarquette (1996) model that describes theatre demand in a learning-by-consuming process, based on previous consumption experiences, including pleasant and unpleasant surprises in these experiences. Since we only have a cross-section survey we can not use this dynamic formulation of the model. However, Lévy-Garboua and Montmarquette (1996) also include a static formulation, without a learning process, where the accumulated experience remains constant.

In accordance with this model the consumption of a cultural good, in general, depends on its marginal utility, its price, the marginal utility of income and on the subjective valuation of this good. This subjective value can be approximated by individual characteristics such as sex, age, studies or family responsibilities in the static framework.

In this, and in a more general, context, where the individual chooses between consuming \( y_i = 1 \) or not consuming \( y_i = 0 \), the good \( i \) consumption probability can be estimated by a probit model of the form:

\[
\Pr(y_i = 1) = \text{Prob}(u_i > -\beta x)
\]  

[1]
where \( \beta \) is the vector of parameters to be estimated, \( x \) is a column vector of explanatory variables and \( \nu \) is a random disturbance that follows a normal distribution.

Given our interest in analysing the profiles of people who listen to classical and modern music at least once a week and the relationship among them, that is, whether or not these people define two independent sets or if there is a significant correlation between both groups, the empirical model to be estimated is a bivariate probit. This model allows us to analyse the determinants of the probability of listening to each of these types of music and the relationship between both probabilities. The bivariate probit is a natural extension of the probit model that includes two equations with correlated disturbances (Greene, 1997, p. 906) whose general specification is:

\[
\begin{align*}
    y_1^* &= \beta_1'x_1 + u_1 \\
    y_2^* &= \beta_2'x_2 + u_2
\end{align*}
\]

where \( y_i^* \) are unobserved preferences and \( u_1 \) and \( u_2 \) follow a bivariate normal distribution with zero means, variances equal one. If these disturbances are not linearly independent, their correlation coefficient will be denoted by \( \rho \). This parameter allows us to test the correlation between the two types of music audiences. If \( \rho \) is equal to zero, these two equations are independent and they could be estimated by two independent probits equations and, then, we can conclude that classical music fans are different from modern music fans.5

The dependent variables of the equations [2] and [3] of this bivariate probit model are being fond of modern music and classical music respectively. For music of type \( i \) (i = classical, modern) the structure of answers that we can observe in the Survey (\( y_i \)), and their relationship with the unobserved preferences (\( y_i^* \)), is:
\[ y_i = \text{daily, weekly} = 1 \quad \text{if} \ y_i > 0 \]
\[ y_i = \text{never, annually, monthly} = 0 \quad \text{if} \ y_i \neq 0 \]

The vectors of explanatory variables \( x_1 \) and \( x_2 \) are composed of socioeconomic characteristics that could explain the formation of the individual's musical tastes and the availability of time to listen to music that may affect the subjective valuation and the utility function. We can group these variables into the following categories:

- **Personal characteristics**: includes sex, age, education and marital status.
- **Familiar responsibilities**: includes number of children under fourteen years and number of weekly hours dedicated to household tasks.
- **Geographical variables**: city size and region of residence of the interviewee.
- **Relationship with economic activity**: five fictitious variables that represent being employee, student, housewife unemployed and retired, respectively.
- **Occupational variables**: with this group of variables we try to approximate the income effect which is also approximated by a group of three fictitious variables that pick up the presence of other kinds of income different from labour income.\(^6\)

Since the effect of age changes with the type of activity, as we have tested in previous versions of this model, equations [2] and [3] include interaction terms between the dummy variables of relationship with the activity and the difference between the age and average age of each group. These terms of interaction were denominated \( \text{HOWIAGE, EMPAGE, UNEMPAGE, RETAGE and STUDAGE} \) respectively.\(^7\)
This form of defining the interaction terms is not arbitrary since we want the coefficients of the dummy variables of relationship with the activity to be interpreted directly. When defining these interaction terms, if no additional correction is made, the coefficients of the dummy variables will pick up the specific effects of belonging to each group evaluated at the age of reference, which will then be zero years. That is, if STUDAGE is defined as the product of STUDENT for AGE, the coefficient of the variable STUDENT will pick up the effect of being a student and a new-born simultaneously, which has no sense. However, if we subtract the mean age of the students from the variable AGE when we define the interaction term STUDAGE, the coefficient of STUDENT will pick up the effect of being a student, evaluating this effect when they are 21.63 years old, which is the average age of the students of our sample. Hence, we could interpret this coefficient as the specific effect of being an average student. On the other hand, the estimated coefficient for the interaction term STUDAGE will be the same in both cases and will pick up the effect of time on the probability of being a fan of modern music and of classical music when the interviewees are students.

All these variables are precisely defined in the Appendix.

EMPIRICAL RESULTS

The results of the bivariate probit model estimation for classical and modern music audiences are shown in Table II.
The log likelihood ratio endorses the goodness of the estimation. Under the null hypothesis that all the coefficients of the model are zero, two times the difference between the
log-likelihood unrestricted and restricted values follows a $\chi^2$ distribution. However, its value is 6774.98 in our case, which exceeds the critical point of this distribution with 91 degrees of freedom. Hence, the alternative hypothesis can not be rejected.

Moreover, the coefficient $p$, which shows the correlation between the estimation errors corresponding to each group, is 0.488 and we can reject the hypothesis that $p$ equals zero. That it is to say that we can reject the hypothesis that classical music fans and modern music fans belong to independent groups. Controlling for the effect of socioeconomic characteristics of the interviewees (sex, education, familiar responsibilities, relationship with economic activity, etc.), we can conclude that both groups have a common background that we can identify with the presence an "innate" taste for music that allows us to believe that, if you are a music fan, you listen to both classical and modern music. This conclusion gives us more robust – and partially conflicting - evidence than the findings by Kurabayashi and Ito (1992), although they have used a correlation analysis.

We now discuss the particular effect of each socioeconomic variable on each audience group.

We do not notice different gender behaviour between classical music or modern music audiences. As could be expected, however, the educational level has a positive and increasing effect on both types of music. Moreover, the analysis of the coefficients of the corresponding variables reveals that this effect is higher on classical music. Here we have evidence of the importance of education in the process of acquisition of musical tastes, especially in the case of classical music. This evidence is reinforced when we add the impact of those variables which reflect the educational level of the interviewee's parents (TSTUDFA and TSTUDMA). These variables, which can be interpreted as proxies of cultural environment and heritage, have
positive and statistically significant coefficients in the classical music equation. We conclude therefore that the taste for this type of music is reinforced when the interviewee has grown in a high cultural environment.

In general terms, we cannot find a significant influence of marital status on music consumption. However, other variables that reflect familiar responsibilities have a valuable influence. On one hand the coefficient of the variable N14 has a negative sign, so the presence of children under 14 discourages listening to both types of music. On the other hand, the variable TIMEHOME, which represents time spent in household tasks, has a positive influence, though in the case of classical music it is only significant at a confidence level of 87%. These phenomena could be explained by considering that listening to music and doing household tasks are not incompatible; it is more probable that the former accompanies the latter, especially in the case of modern music whose listening requires less attention or concentration.

Geographic variables show that there is a group of regions with a lower music liking than Madrid, which is the reference region. Some less-developed regions, like Andalucia, Castilla y León and Galicia, have a negative and statistically significant coefficient for both types of music. In the case of classical music, Extremadura is in the same situation. The importance of all these geographic variables has been verified applying a joint significance test, rejecting the null hypothesis of all coefficients on these variables being zero. Therefore, we should conclude that there are important regional differences that can not be neglected.

As we have pointed out earlier, relationship with the economic activity has been placed in interaction with age because we have detected that behaviour is very sensitive to age but that the age effect is not homogeneous between groups. We have included four dummy
variables representing four different situations: employee, unemployed, retired and student. The category of reference is being a housewife. We have also included five interaction terms defined by the variables HOWIAGE, EMPAGE, UNEMPAGE, RETAGE and STUDAGE.\textsuperscript{10}

In the case of modern music, all the categories, except retired, show positive and statistically significant coefficients. This implies that, when evaluated at the average age of each group, all the categories listen to more modern music than housewives do, except retired. Moreover, age a negative and significant effect has for all the categories. However, the strength of this effect is not homogeneous, being higher for students, the unemployed and employees. Nevertheless, we can conclude that young people listen more to modern music, whatever their relationship with economic activity.

The outcomes corresponding to classical music are less uniform. First, all dummy variables are not statistically significant so we cannot immediately identify significantly different behaviour among these categories and the housewives, evaluated at the average age of each group. However, when we incorporate the age interaction terms, some important changes occur. The housewife variable (HOWIAGE) has a negative and statistically significant coefficient, while the one corresponding to the student variable (STUDAGE) is also significant, but with a positive sign. These results show us that housewives listen to more classical music when they are young (the younger they are the more classical music they listen to). Among students, we have the opposite result: the older they are the more classical music they listen to. In the other categories, we cannot find significant changes.

In our model we also include dummy variables that try to capture the occupational level. These variables are defined taking into account the present occupation of people who are occupied or the highest level attained by those that have been occupied previously. These
variables could be reflecting various effects. On the one hand, they could measure a certain kind of income or social class effect, because is quite common to assume that people with a highly qualified labour status probably belong to the upper class and earn high incomes (Towse, 1994). On the other hand, these variables could be considered as proxies of the process of acquisition of taste a process that is also approximated by educational level of the interviewee and/or his (her) parents.

The occupation variables have a different influence with respect to both types of music. In the case of modern music these variables are not statistically significant, so occupation does not influence on modern music audiences. Hence we cannot observe the presence of an income effect (or a social class effect). The situation is quite different in classical music. Here, the coefficients of the most qualified labour categories are positive and significant: people who belong to these are more interested in this music and, consequently, we are able to detect a positive income (or social class) effect. If we add the results corresponding to variables representing the educational level of the interviewee and his (her) parents, we conclude that cultural environment and heritage and the acquisition of taste have a positive and significant influence on classical music listening. We do not find the same result in the case of modern music.

The presence of an income effect could be reinforced by the presence of variables that include non-labour earnings. In general terms, these variables do not add any information, because they are not statistically significant, except one case in classical music where we observe that people with earnings coming from landed property are more interested in classical music. Hence, it is not strange that the likelihood ratio test shows that these variables are jointly significant only at a 10% level.
CONCLUSIONS

In this paper we analyse the differences between the consumption of two types of music, modern and classic music, in Spain and we quantify the influence exercised by diverse socioeconomic features on the demands of these goods. In this way, we will describe the average profile of their consumers. Our theoretical framework is a model where individual consumption of both types of music depends on socioeconomic characteristics.

To carry out this task we have used the information contained in the Survey of Structure, Conscience and Biography of Class (ECBC-91). This survey offers individual data on the audition of classical and modern music, which are the activities under investigation.

We analyse the relationship between these two types of music listeners, using a bivariate probit model. We have tested the presence of a positive and statistically significant correlation between classical music and modern music listeners. So we can identify the presence of a common background between both groups that can be associated with the presence of an "innate" taste for music.

Our empirical work also allows us to reveal out the most important characteristics of both types of audiences. We cannot detect gender and marital status influences on classical or modern music listeners' behaviour. However, as could be expected, educational status has a positive and increasing effect and we also see that cultural environment and heritage and the acquisition of taste have a positive and significant effect on classical music listening, but not in modern music one.
Finally, we study the influence of the relationship with economic activity. First, we test whether this influence is conditioned by the age variable. Retired and housewives are less interested in modern music than students, employees and unemployed. However, within every economic category, young people are more interested in modern music than other people are.

In the case of classical music we find that age has a decreasing effect among housewives and an increasing one among students but age has no effect for the rest of categories. Moreover, these are no differences among the average members of these groups in their probabilities of listening to classical music.
APENDIX

In this Appendix we define the variables used in this paper and then present the results of the estimation of the multinomial ordered probit models.

**Dependent variables**

MODERN: Dummy variable; it takes value one when the interviewee listens to modern music daily or weekly, and zero otherwise.

CLASSIC: Dummy variable; it takes value one when the interviewee listens to classic music daily or weekly, and zero otherwise.

**Independent variables**

WOMAN: Dummy variable; it takes value one when the interviewee is a woman, and zero otherwise.

*Studies*

PRIMARY: Dummy variable; it takes value one when the interviewee has elementary studies and zero otherwise.

HIGH SCHOOL: Dummy variable; it takes value one when the interviewee has intermediate studies and zero otherwise.

UNIVERSITY: Dummy variable; it takes value one when the interviewee has university studies and zero otherwise.

TSTUDFA: Father's years of formal studies.

TSTUDMA: Mother's years of formal studies.

*Marital status*

SINGLE: Dummy variable; it takes value one when the interviewee is single and zero otherwise.

MARRIED: Dummy variable; it takes value one when the interviewee is married and zero otherwise.

DIVORCED: Dummy variable; it takes value one when the interviewee is separated or divorced and zero otherwise.

N14: Number of children under fourteen years.

TIMEHOME: Number of weekly hours dedicated to household tasks.

CITY SIZE: Number of inhabitants of the city of residence, in thousands.
Occupational level
HWHITEC: Dummy variable; it takes value one when the interviewee is a white collar worker or a professional with four or more years of university studies and zero otherwise.

MWHITEC: Dummy variable; it takes value one when the interviewee is a white collar worker or a professional with less than four years of university studies and zero otherwise.

CLERICAL: Dummy variable; it takes value one when the interviewee has a clerical occupation and zero otherwise.

SERVWORK: Dummy variable; it takes value one when the interviewee is a services worker and zero otherwise.

SKILLEDM: Dummy variable; it takes value one when the interviewee is a skilled manual worker and zero otherwise.

Relationship with the economic activity
HOUSEWIFE: Dummy variable; it takes value one when the interviewee is a housewife and zero otherwise.

EMPLOYEE: Dummy variable; it takes value one when the interviewee is employee and zero otherwise.

UNEMPLOYED: Dummy variable; it takes value one when the interviewee is unemployed and zero otherwise.

RETIRED: Dummy variable; it takes value one when the interviewee is retired and zero otherwise.

STUDENT: Dummy variable; it takes value one when the interviewee is a student and zero otherwise.

HOWIAGE: Interaction term; it takes value (age-46.57) when the interviewee is a housewife and zero otherwise.

EMPAGE: Interaction term; it takes value (age-38.12) when the interviewee is employee and zero otherwise.

UNEMPAGE: Interaction term; it takes value (age-33.11) when the interviewee is unemployed and zero otherwise.

RETAGE: Interaction term; it takes value (age-62.82) when the interviewee is retired and zero otherwise.

STUDAGE: Interaction term; it takes value (age-21.63) when the interviewee is a student and zero otherwise.
AGE: Age of the interviewee.

Other incomes
RKI: Dummy variable; it takes value one when the interviewee has rents from properties and zero otherwise.

RKM: Dummy variable; it takes value one when the interviewee has yields from bonds and shares and zero otherwise.

RSS: Dummy variable; it takes value one when the interviewee has social security benefits and zero otherwise.

Table III displays the descriptive statistics of these variables.
Table III
Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMAN</td>
<td>0.49</td>
<td>0.50</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>PRIMARY</td>
<td>0.49</td>
<td>0.50</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>HIGH SCHOOL</td>
<td>0.24</td>
<td>0.43</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>UNIVERSITY</td>
<td>0.15</td>
<td>0.36</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>TSTUDFA</td>
<td>4.33</td>
<td>4.81</td>
<td>0.00</td>
<td>25.0</td>
</tr>
<tr>
<td>TSTUDMA</td>
<td>3.14</td>
<td>3.87</td>
<td>0.00</td>
<td>51.0</td>
</tr>
<tr>
<td>SINGLE</td>
<td>0.30</td>
<td>0.46</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>MARRIED</td>
<td>0.66</td>
<td>0.47</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>DIVORCED</td>
<td>0.01</td>
<td>0.11</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>N14</td>
<td>0.55</td>
<td>0.90</td>
<td>0.00</td>
<td>5.00</td>
</tr>
<tr>
<td>TIMEHOME</td>
<td>24.49</td>
<td>26.42</td>
<td>0.00</td>
<td>98.0</td>
</tr>
<tr>
<td>CITY SIZE</td>
<td>321.34</td>
<td>763.17</td>
<td>0.00</td>
<td>3214</td>
</tr>
<tr>
<td>ANDALUZ</td>
<td>0.18</td>
<td>0.38</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>ARAGON</td>
<td>0.04</td>
<td>0.19</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>ASTUR</td>
<td>0.03</td>
<td>0.16</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>BALEAR</td>
<td>0.02</td>
<td>0.14</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>CANAR</td>
<td>0.04</td>
<td>0.19</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>CANTA</td>
<td>0.01</td>
<td>0.11</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>CASTMA</td>
<td>0.04</td>
<td>0.21</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>CASTLE</td>
<td>0.06</td>
<td>0.25</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>CATALAN</td>
<td>0.16</td>
<td>0.37</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>VALEN</td>
<td>0.11</td>
<td>0.31</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>EXTRE</td>
<td>0.03</td>
<td>0.17</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>GALICIA</td>
<td>0.07</td>
<td>0.26</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>MURCIA</td>
<td>0.03</td>
<td>0.16</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>NAVARRA</td>
<td>0.00</td>
<td>0.07</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>EUSKADI</td>
<td>0.06</td>
<td>0.24</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>RIOJA</td>
<td>0.01</td>
<td>0.10</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>HIWHITEC</td>
<td>0.11</td>
<td>0.31</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>MWHITEC</td>
<td>0.05</td>
<td>0.23</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>CLERICAL</td>
<td>0.10</td>
<td>0.30</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>SERVWORK</td>
<td>0.13</td>
<td>0.34</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>SKILLEDM</td>
<td>0.31</td>
<td>0.46</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>HOUSEWIFE</td>
<td>0.24</td>
<td>0.34</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>EMPLOYEE</td>
<td>0.53</td>
<td>0.50</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>UNEMPLOYED</td>
<td>0.08</td>
<td>0.28</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>RETIRED</td>
<td>0.09</td>
<td>0.29</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>STUDENT</td>
<td>0.06</td>
<td>0.23</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>RKI</td>
<td>0.03</td>
<td>0.18</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>RKM</td>
<td>0.03</td>
<td>0.18</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>RSS</td>
<td>0.35</td>
<td>0.48</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>AGE by Groups:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global</td>
<td>41.11</td>
<td>14.76</td>
<td>18.0</td>
<td>74.0</td>
</tr>
<tr>
<td>HOUSEWIFE</td>
<td>46.57</td>
<td>6.17</td>
<td>19.0</td>
<td>70.0</td>
</tr>
<tr>
<td>EMPLOYEE</td>
<td>38.12</td>
<td>8.86</td>
<td>18.0</td>
<td>69.0</td>
</tr>
<tr>
<td>UNEMPLOYED</td>
<td>33.11</td>
<td>3.62</td>
<td>19.0</td>
<td>66.0</td>
</tr>
<tr>
<td>RETIRED</td>
<td>62.82</td>
<td>2.02</td>
<td>26.0</td>
<td>74.0</td>
</tr>
<tr>
<td>STUDENT</td>
<td>21.63</td>
<td>0.68</td>
<td>18.0</td>
<td>38.0</td>
</tr>
</tbody>
</table>
NOTES.

1. Baumol and Bowen analyse United Kingdom audience too and, although they do not offer as detailed
information as in the USA case, they state that "the similarity of the British and American results is
remarkable (...) the results once again are very consistent from survey to survey and from art to art" (Baumol
and Bowen, 1966, pp. 89 - 90).

2. The author considers that educational level is the best indicator of income level in the absence of such data

3. Studies have a weak impact on the "Trad" category. We can only see a significant effect when we pass from
grade school to some high school level; in the rest of the cases we cannot find significant behaviour
differences. If we focus our attention on TV audience, education has a negative influence: the higher the
educational level, the lower the TV audience.

4. Other cultural goods or activities covered by this survey are reading books and newspapers and cinema,
museums and sport events attendance.

5. Therefore, if we want to estimate a bivariate probit we should carry out a test on the independence of the
disturbances of these equations. The null hypothesis (Ho: $\rho \neq 0$) could be tested applying a simple $t$
test, which is equivalent to the Wald test.

6. The level of response to the questions on the amount perceived by these types of rent is very low in the
survey reducing the sample size in a 60%. For this reason we have preferred to use the fictitious variables.

7. For instance, HOWIAGE is defined as the product of the variable HOUSEWIFE times the difference between
the interviewed age and the average age of the housewives (46.57):

\[
\text{HOWIAGE} = \text{HOUSEWIFE} \times (\text{AGE} - \text{AVERAGE AGE OF THE HOUSEWIVES})
\]

8. The likelihood ratio test value for these variables is 120.54 and the critical value of the corresponding $\chi^2$
with 32 degrees of freedom, is 52.67.

9. Recall that these interaction terms are evaluated subtracting the average age of each category.

10. For the null hypothesis that there are no differences among these groups and that age has a homogeneous
behaviour the likelihood ratio tests value was 60.23 and the critical value of a $\chi^2$ with 17 degrees of freedom
is 33.41. Hence, we can not reject the alternative hypothesis that such a kind of differences exists.

11. The likelihood ratio test value for the occupational variables is 32.59 and the critical value of the
 corresponding $\chi^2$, with ten degrees of freedom, is 23.21.
12. The likelihood ratio test value is 12.16 and the critical value of the corresponding $\chi^2$ with six degrees of freedom at the 10% level of confidence, is 10.64.
REFERENCES


Doc. 001/88  JUAN A. VAZQUEZ GARCIA.- Las intervenciones estatales en la minería del carbón.

Doc. 002/88  CARLOS MONASTERIO ESCUDERO.- Una valoración crítica del nuevo sistema de financiación autonómica.

Doc. 003/88  ANA ISABEL FERNANDEZ ALVAREZ; RAFAEL GARCIA RODRIGUEZ; JUAN VENTURA VICTORIA.- Análisis del crecimiento sostenible por los distintos sectores empresariales.

Doc. 004/88  JAVIER SUAREZ PANDIELLO.- Una propuesta para la integración multijurisdiccional.

Doc. 005/89  LUIS JULIO TASCON FERNANDEZ; JOSE MANUEL DIEZ MODINO.- La modernización del sector agrario en la provincia de León.

Doc. 006/89  JOSE MANUEL PRADO LORENZO.- El principio de gestión continuada: Evolución e implicaciones.


Doc. 008/89  FELIX LOBO ALEU.- El gasto público en productos industriales para la salud.

Doc. 009/89  FELIX LOBO ALEU.- La evolución de las patentes sobre medicamentos en los países desarrollados.

Doc. 010/90  RODOLFO VAZQUEZ CASIELLES.- Investigación de las preferencias del cosnumidor mediante análisis de conjunto.

Doc. 011/90  ANTONIO AFRICIO PEREZ.- Infracciones y sanciones en materia tributaria.

Doc. 012/90  MONTSERRAT DIAZ FERNANDEZ; CONCEPCION GONZALEZ VEIGA.- Una aproximación metodológica al estudio de las matemáticas aplicadas a la economía.

Doc. 013/90  EQUIPO MECO.- Medidas de desigualdad: un estudio analítico

Doc. 014/90  JAVIER SUAREZ PANDIELLO.- Una estimación de las necesidades de gastos para los municipios de menor dimensión.

Doc. 015/90  ANTONIO MARTINEZ ARIAS.- Auditoría de la información financiera.

Doc. 016/90  MONTSERRAT DIAZ FERNANDEZ.- La población como variable endógena

Doc. 017/90  JAVIER SUAREZ PANDIELLO.- La redistribución local en los países de nuestro entorno.

Doc. 018/90  RODOLFO GUTIERREZ PALACIOS; JOSE MARIA GARCIA BLANCO.- "Los aspectos invisibles" del declive económico: el caso de Asturias.

Doc. 019/90  RODOLFO VAZQUEZ CASIELLES; JUAN TRESPALACIOS GUTIERREZ.- La política de precios en los establecimientos detallistas.

Doc. 020/90  CANDIDO PAÑEDA FERNANDEZ.- La demarcación de la economía (seguida de un apéndice sobre su relación con la Estructura Económica).

Doc. 021/90  JOAQUIN LORENSES.- Margen precio-coste variable medio y poder de monopólio.

Doc. 022/90  MANUEL LAFUENTE ROBLED; ISIDRO SANCHEZ ALVAREZ.- El T.A.E. de las operaciones bancarias.

Doc. 023/90  ISIDRO SANCHEZ ALVAREZ.- Amortización y coste de préstamos con hojas de cálculo.
Doc. 024/90  LUIS JULIO TASCON FERNANDEZ; JEAN-MARC BUIGUES.- Un ejemplo de política municipal: precios y salarios en la ciudad de León (1613-1813).

Doc. 025/90  MYRIAM GARCIA OLALLA.- Utilidad de la teorías de las opciones para la administración financiera de la empresa.

Doc. 026/91  JOAQUIN GARCIA MURCIA.- Novedades de la legislación laboral (octubre 1990 - enero 1991)

Doc. 027/91  CANDIDO PAÑEDA.- Agricultura familiar y mantenimiento del empleo: el caso de Asturias.

Doc. 028/91  PILAR SAENZ DE JUBERA.- La fiscalidad de planes y fondos de pensiones.

Doc. 029/91  ESTEBAN FERNANDEZ SANCHEZ.- La cooperación empresarial: concepto y tipología (*)

Doc. 030/91  JOAQUIN LORENCES.- Características de la población parada en el mercado de trabajo asturiano.

Doc. 031/91  JOAQUIN LORENCES.- Características de la población activa en Asturias.

Doc. 032/91  CARMEN BENAVIDES GONZALEZ.- Política económica regional

Doc. 033/91  BENITO ARRUÑADA SANCHEZ.- La conversión coactiva de acciones comunes en acciones sin voto para lograr el control de las sociedades anónimas: De cómo la ingenuidad legal prefigura el fraude.

Doc. 034/91  BENITO ARRUÑADA SANCHEZ.- Restricciones institucionales y posibilidades estratégicas.

Doc. 035/91  NURIA BOSCH; JAVIER SUAREZ PANDIELLO.- Seven Hypotheses About Public Chjoice and Local Spending. (A test for Spanish municipalities).

Doc. 036/91  CARMEN FERNANDEZ CUERVO; LUIS JULIO TASCON FERNANDEZ.- De una olvidada revisión crítica sobre algunas fuentes histórico-económicas: las ordenanzas de la gobernación de la cabrera.

Doc. 037/91  ANA JESUS LOPEZ; RIGOBERTO PEREZ SUAREZ.- Indicadores de desigualdad y pobreza. Nuevas alternativas.

Doc. 038/91  JUAN A. Vázquez GARCIA; MANUEL HERNANDEZ MUÑIZ.- La industria asturiana: ¿Podemos pasar la página del declive?.

Doc. 039/92  INES RUBIN FERNANDEZ.- La Contabilidad de la Empresa y la Contabilidad Nacional.


Doc. 041/92  ESTEBAN GARCIA CANAL.- Tendencias empíricas en la conclusión de acuerdos de cooperación.

Doc. 042/92  JOAQUIN GARCIA MURCIA.- Novedades en la Legislación Laboral.

Doc. 043/92  RODOLFO VAZQUEZ CAsIELLES.- El comportamiento del consumidor y la estrategia de distribución comercial: Una aplicación empírica al mercado de Asturias.

Doc. 044/92  CAMILO JOSE VAZQUEZ ORDAS.- Un marco teórico para el estudio de las fusiones empresariales.

Doc. 045/92  CAMILO JOSE VAZQUEZ ORDAS.- Creación de valor en las fusiones empresariales a través de un mayor poder de mercado.

Doc. 046/92  ISIDRO SANCHEZ ALVAREZ.- Influencia relativa de la evolución demográfica en el futuro aumento del gasto en pensiones de jubilación.

Doc. 047/92  ISIDRO SANCHEZ ALVAREZ.- Aspectos demográficos del sistema de pensiones de jubilación español.

pag.2
Doc. 048/92  SUSANA LOPEZ ARES.- Marketing telefónico: concepto y aplicaciones.
Doc. 049/92  CESAR RODRIGUEZ GUTIERREZ.- Las influencias familiares en el desempleo juvenil.
Doc. 050/92  CESAR RODRIGUEZ GUTIERREZ.- La adquisición de capital humano: un modelo teórico y su contrastación.
Doc. 051/92  MARTA IBANEZ PASCUAL.- El origen social y la inserción laboral.
Doc. 052/92  JUAN TRESPALACIOS GUTIERREZ.- Estudio del sector comercial en la ciudad de Oviedo.
Doc. 053/92  JULITA GARCIA DIEZ.- Auditoria de cuentas: su regulación en la CEE y en España. Una evidencia de su importancia.
Doc. 054/92  SUSANA MENENDEZ REQUEJO.- El riesgo de los sectores empresariales españoles: rendimiento requerido por los inversores.
Doc. 055/92  CARMEN BENAVIDES GONZALEZ.- Una valoración económica de la obtención de productos derivados del petróleo a partir del carbón.
Doc. 056/92  IGNACIO ALFREDO RODRIGUEZ.- Consecuencias sobre el consumidor de las actuaciones bancarias ante el nuevo entorno competitivo.
Doc. 057/92  LAURA CABIEDES MIRAGAYA.- Relación entre la teoría del comercio internacional y los estudios de organización industrial.
Doc. 058/92  JOSE LUIS GARCIA SUAREZ.- Los principios contables en un entorno de regulación.
Doc. 059/92  Mª JESUS RIO FERNANDEZ; RIGOBERTO PEREZ SUAREZ.- Cuantificación de la concentración industrial: un enfoque analítico.
Doc. 060/94  Mª JOSE FERNANDEZ ANTUNA.- Regulación y política comunitaria en materia de transportes.
Doc. 061/94  CESAR RODRIGUEZ GUTIERREZ.- Factores determinantes de la afiliación sindical en España.
Doc. 062/94  VICTOR FERNANDEZ BLANCO.- Determinantes de la localización de las empresas industriales en España: nuevos resultados.
Doc. 063/94  ESTEBAN GARCIA CANAL.- La crisis de estructura multidivisional.
Doc. 064/94  MONTserrat DIAZ FERNANDEZ; EMILIO COSTA REPARAZ.- Metodología de la investigación econométrica.
Doc. 065/94  MONTserrat DIAZ FERNANDEZ; EMILIO COSTA REPARAZ.- Análisis cualitativo de la fecundidad y participación femenina en el mercado de trabajo.
Doc. 066/94  JOAQUIN GARCIA MURCIA.- La supervisión colectiva de los actos de contratación: la Ley 2/1991 de información a los representantes de los trabajadores.
Doc. 067/94  JOSE LUIS GARCIA LARRESTA; Mª VICTORIA RODRIGUEZ URIA.- Coherencia en preferencias difusas.
Doc. 068/94  VICTOR FERNANDEZ; JOAQUIN LORENces; CESAR RODRIGUEZ.- Diferencias interterritoriales de salarios y negociación colectiva en España.
Doc. 069/94  Mª DEL MAR ARENAS PARRA; Mª VICTORIA RODRIGUEZ URIA.- Programación clásica y teoría del consumidor.
Doc. 070/94  Mª DE LOS ÁNGELES MENÉNDEZ DE LA UZ; Mª VICTORIA RODRÍGUEZ URÍA.— Tantos efectivos en los empréstitos.

Doc. 071/94  AMELIA BILBAO TEROL; CONCEPCIÓN GONZÁLEZ VEIGA; Mª VICTORIA RODRÍGUEZ URÍA.— Matrices especiales. Aplicaciones económicas.

Doc. 072/94  RODOLFO GUTIÉRREZ.— La representación sindical: Resultados electorales y actitudes hacia sindicatos.

Doc. 073/94  VÍCTOR FERNÁNDEZ BLANCO.— Economías de aglomeración y localización de las empresas industriales en España.

Doc. 074/94  JOAQUÍN LORENÇES RODRÍGUEZ; FLORENTINO FELGUEROSO FERNÁNDEZ.— Salarios pactados en los convenios provinciales y salarios percibidos.

Doc. 075/94  ESTEBAN FERNÁNDEZ SÁNCHEZ; CAMILO JOSÉ VÁZQUEZ ORDÁS.— La internacionalización de la empresa.


Doc. 077/94  VÍCTOR IGLESIAS ARGÜELLES.— Tipos de variables y metodología a emplear en la identificación de los grupos estratégicos. Una aplicación empírica al sector detallista en Asturias.

Doc. 078/94  MARTA IBÁÑEZ PASCUAL; F. JAVIER MATO DÍAZ.— La formación no reglada a examen. Hacia un perfil de sus usuarios.

Doc. 079/94  IGNACIO A. RODRÍGUEZ-DEL BOSQUE RODRÍGUEZ.— Planificación y organización de la fuerza de ventas de la empresa.

Doc. 080/94  FRANCISCO GONZÁLEZ RODRÍGUEZ.— La reacción del precio de las acciones ante anuncios de cambios en los dividendos.

Doc. 081/94  SUSANA MENÉNDEZ REQUEJO.— Relaciones de dependencia de las decisiones de inversión, financiación y dividendos.

Doc. 082/95  MONTSEÑRAT DÍAZ FERNÁNDEZ; EMILIO COSTA REPARAZ; Mª del MAR LLORENTE MARRÓN.— Una aproximación empírica al comportamiento de los precios de la vivienda en España.

Doc. 083/95  Mª CONCEPCIÓN GONZÁLEZ VEIGA; Mª VICTORIA RODRÍGUEZ URÍA.— Matrices semipositivas y análisis interindustrial. Aplicaciones al estudio del modelo de Spraffa-Leontief.

Doc. 084/95  ESTEBAN GARCÍA CANAL.— La forma contractual en las alianzas domésticas e internacionales.

Doc. 085/95  MARGARITA ARGÜELLES VÉLEZ; CARMEN BENAVIDES GONZÁLEZ.— La incidencia de la política de la competencia comunitaria sobre la cohesión económica y social.


Doc. 087/95  JUAN PRIETO RODRÍGUEZ.— Discriminación salarial de la mujer y movilidad laboral.

Doc. 088/95  Mª CONCEPCIÓN GONZÁLEZ VEIGA.— La teoría del caos. Nuevas perspectivas en la modelización económica.

Doc. 089/95  SUSANA LÓPEZ AREN.— Simulación de fenómenos de espera de capacidad limitada con llegadas y número de servidores dependientes del tiempo con hoja de cálculo.

Doc. 090/95  JAVIER MATO DÍAZ.— ¿Existe sobrecualificación en España?: Algunas variables explicativas.

Doc. 091/95  Mª JOSÉ SANTO PÉREZ.— Estrategia de distribución para productos y mercados industriales.

Doc. 092/95  JOSÉ BAÑOS PINO; VÍCTOR FERNÁNDEZ BLANCO.— Demanda de cine en España: Un análisis de cointegración.
Mª LETICIA SANTOS VIJANDE.- La política de marketing en las empresas de alta tecnología.

RODOLFO VÁZQUEZ CASTELES; IGNACIO RODRÍGUEZ-DEL BOSQUE; AGUSTÍN RUIZ VEGA.- Expectativas y percepciones del consumidor sobre la calidad del servicio. Grupos estratégicos y segmentos del mercado para la distribución comercial minorista.

ANA ISABEL FERNÁNDEZ; SILVIA GÓMEZ ANSÓN.- La adopción de acuerdos estatutarios antiadquisición.. Evidencia en el mercado de capitales español.

ÓSCAR RODRÍGUEZ BUENEGO.- Partidos, electores y elecciones locales en Asturias. Un análisis del proceso electoral del 28 de Mayo.

ANA Mª DÍAZ MARTÍN.- Calidad percibida de los servicios turísticos en el ámbito rural.


JUAN PRIETO; Mª JOSÉ SUÁREZ.- ¿De tal palo tal astilla?: Influencia de las características familiares sobre la ocupación.

JULITA GARCÍA DÍEZ; RACHEL JUSSARA VIANNA.- Estudio comparativo de los principios contables en Brasil y en España.

FRANCISCO J. DE LA BALLINA BALLINA.- Desarrollo de campañas de promoción de ventas.

ÓSCAR RODRIGUEZ BUENEGO.- Una explicación de la ausencia de la Democracia Cristiana en España.

CÁNDIDO PAÑEDA FERNÁNDEZ.- Estrategias para el desarrollo de Asturias.

SARA Mª ALONSO; BLANCA PÉREZ GLADISH; Mª VICTORIA RODRÍGUEZ URÍA.- Problemas de control óptimo con restricciones: Aplicaciones económicas.

ANTONIO ÁLVAREZ PINILLA; MANUEL MENÉNDEZ MENÉNDEZ; RAFAEL ÁLVAREZ CUESTA.- Eficiencia de las Cajas de Ahorro españolas. Resultados de una función de beneficio.

FLORENTINO FELGUEROSO.- Industrywide Collective Bargaining, Wages Gains and Black Labour Marketing Spain.

JUAN VENTURA.- La competencia gestionada en sanidad: Un enfoque contractual.

MARÍA VICTORIA RODRÍGUEZ URÍA; ELENA CONSUELO HERNÁNDEZ.- Elección social. Teorema de Arrow.

SANTIAGO ÁLVAREZ GARCÍA.- Grupos de interés y corrupción política: La búsqueda de rentas en el sector público.

ANA Mª GUILLEN.- La política de previsión social española en el marco de la Unión Europea.

VÍCTOR MANUEL GONZÁLEZ MENÉDEZ.- La valoración por el mercado de capitales español de la financiación bancaria y de las emisiones de obligaciones.

DRA. MARÍA VICTORIA RODRÍGUEZ URÍA; D. MIGUEL A. LÓPEZ FERNÁNDEZ; Dña. BLANCA Mª PEREZ GLADISH.- Aplicaciones económicas del Control Óptimo. El problema de la maximización de la utilidad individual del consumo. El problema del mantenimiento y momento de venta de una máquina.
OSCAR RODRÍGUEZ BUZNEGO.- Elecciones autonómicas, sistemas de partidos y Gobierno en Asturias.

RODOLFO VÁZQUEZ CASTIELLES; ANA Mª DÍAZ MARTÍN. El conocimiento de las expectativas de los clientes: una pieza clave de la calidad de servicio en el turismo.

JULIO TASCÓN.- El modelo de industrialización pesada en España durante el periodo de entreguerras.-

ESTEBAN FERNÁNDEZ SÁNCHEZ; JOSÉ M. MONTES PEÓN; CAMILO J. VÁZQUEZ ORDÁS.- Sobre la importancia de los factores determinantes del beneficio: Análisis de las diferencias de resultados inter e intraindustriales.

AGUSTÍN RUÍZ VEGA; VICTOR IGLESIAS ARGÜELLES.- Elección de Establecimientos del distrito y conducta de compra de productos de gran consumo. Una aplicación empírica mediante modelos logit.

VICTOR FERNÁNDEZ BLANCO.- Diferencias entre la asistencia al cine nacional y extranjero en España.

RODOLFO VÁZQUEZ CASTIELLES; IGNACIO A. RODRÍGUEZ DEL BOSQUE; ANA Mª DÍAZ MARTÍN.- Estructura multidimensional de la calidad de servicio en cadenas de supermercado: desarrollo y validación de la escala calsuper.

ANA BEIÉN DEL RÍO LANZA.- Elementos de medicación de marca desde un enfoque de marketing.

JULITA GARCÍA DÍEZ; CRISTIAN MIAZZO.- Análisis Comparativo de la Información contable empresarial en Argentina y España.

Mª MAR LLORENTE MARRÓN; D. EMILIO COSTA REPARAZ; Mª MONTSERRAT DÍAZ FERNÁNDEZ.- El Marco teórico de la nueva economía de la familia. Principales aportaciones.

SANTIAGO ALVAREZ GARCÍA.- El Estado del bienestar. Orígenes, Desarrollo y situación actual.

CONSUELO ABELLÁN COLODRÓN.- La Ganancia salarial esperada como determinante de la decisión individual de emigrar.

ESTHER LAFUENTE ROBLEDO.- La acreditación hospitalaria: Marco teórico general.

JOSE ANTONIO GARAY GONZÁLEZ.- Problemática contable del reconocimiento del resultado en la empresa constructora.

ESTEBAN FERNÁNDEZ; JOSE M.MONTES; GUILLERMO PÉREZ-BUSTAMANTE; CAMILO VÁZQUEZ.- Barreras a la imitación de la tecnología.

VICTOR IGLESIAS ARGÜELLES; JUAN A. TRESPALACIOS GUTIERREZ; RODOLFO VÁZQUEZ CASTIELLES.- Los resultados alcanzados por las empresas en las relaciones en los canales de distribución.

LETICIA SANTOS VIJANDE; RODOLFO VÁZQUEZ CASTIELLES.- La innovación en las empresas de alta tecnología: Factores condicionantes del resultado comercial.

RODOLFO GUTIÉRREZ.- Individualism and collectivism in human resource practices: evidence from three case studies.

VICTOR FERNÁNDEZ BLANCO; JUAN PRIETO RODRÍGUEZ.- Decisiones individuales y consumo de bienes culturales en España.

SANTIAGO GONZÁLEZ HERNANDO.- Clasificación de productos de consumo y establecimientos del distrito. Análisis empírico de motivaciones y actitudes del consumidor ante la compra de productos de alimentación y droguería.
Doc. 133/97 VICTOR IGLESIAS ARGÜELLES.- Factores determinantes del poder negociador en los canales de distribución de productos turísticos.

Doc. 134/97 INÉS RUBÍN FERNÁNDEZ.- Información sobre operaciones con derivados en los informes anuales de las entidades de depósito.

Doc. 135/97 ESTHER LAFUENTE ROBLEDO; ISABEL MANZANO PÉREZ.- Aplicación de las técnicas DEA al estudio del sector hospitalario en el Principado de Asturias.

Doc. 136/97 VÍCTOR MANUEL GONZÁLEZ MÉNDEZ; FRANCISCO GONZÁLEZ RODRÍGUEZ.- La valoración por el mercado de capitales español de los procedimientos de resolución de insolvencia financiera.

Doc. 137/97 MARÍA JOSÉ SANZO PÉREZ.- Razones de utilización de la venta directa, los distribuidores independientes y los agentes por parte de las empresas químicas españolas.

Doc. 138/97 LUIS OREA.- Descomposición de la eficiencia económica a través de la estimación de un sistema translog de costes: Una aplicación a las cajas de ahorro españolas.

Doc. 139/97 CRISTINA LOPEZ DUARTE; ESTEBAN GARCÍA CANAL.- Naturaleza y estructura de propiedad de las inversiones directas en el exterior: Un modelo integrador basado basado en el análisis de costes de transacción.

Doc. 140/97 CRISTINA LOPEZ DUARTE; ESTEBAN GARCÍA CANAL; ANA VALDÉS LLANES.- Tendencias empíricas en las empresas conjuntas internacionales creadas por empresas españolas (1986-1996).

Doc. 141/97 CONSUELO ABELLÁN COLODRÓN; ANA ISABEL FERNÁNDEZ SÁINZ.- Relación entre la duración del desempleo y la probabilidad de emigrar.

Doc. 142/97 CÉSAR RODRÍGUEZ GUTIÉRREZ; JUAN PRIETO RODRÍGUEZ.- La participación laboral de la mujer y el efecto del trabajador añadido en el caso español.

Doc. 143/97 RODOLFO VÁZQUEZ CÁSIELLES; ANA MARÍA DÍAZ MARTÍN; AGUSTÍN V. RUIZ VEGA.- Planificación de las actividades de marketing para empresas de servicios turísticos: la calidad como soporte de la estrategia competitiva.

Doc. 144/97 LUCÍA AVELLA CAMARERO; ESTEBAN FERNANDEZ SANCHEZ.- Una aproximación a la empresa industrial española: Principales características de fabricación.

Doc. 145/97 ANA SUÁREZ VÁZQUEZ.- Delimitación comercial de un territorio: Importancia de la información proporcionada por los compradores.

Doc. 146/97 CRISTINA LOPEZ DUARTE; ESTEBAN GARCÍA CANAL.- La inversión directa realizada por empresas españolas: análisis a la luz de la teoría del ciclo de desarrollo de la inversión directa en el exterior.

Doc. 147/98 ANA BELEN DEL RIO LAMZA; VICTOR IGLESIAS ARGÜELLES; RODOLFO VÁZQUEZ CÁSIELLES; AGUSTÍN RUIZ VEGA.- Metodologías de medición del valor de la marca.

Doc. 148/98 RAFAEL ALVAREZ CUESTA.- La estimación econométrica de fronteras de producción: una revisión de la literatura.

Doc. 149/98 FERNANDO RUBIERA MOROLLO.- Análisis univariante de las series de empleo terciario de las regiones españolas.

Doc. 150/98 JOSE ANTONIO GARAY GONZALEZ.- Los gastos y los ingresos plurianuales.
ISABEL GARCÍA DE LA IGLESIA. - La elección contable para los gastos de investigación y desarrollo.

LUIS CASTELLANOS VAL; EMILIO COSTA REPARAZ. - Teoría de sistemas y análisis económico: una aproximación metodológica.

Mª DEL CARMEN RAMOS CARVAJAL. - Estimación indirecta de coeficientes input-output.

RODOLFO VÁZQUEZ CASIELLES; ANA MARÍA DÍAZ MARTÍN; Mª. LETICIA SANTOS VIJANDE; AGUSTÍN V. RUIZ VEGA. - Utilidad del análisis conjunto para establecer la importancia de las estrategias de calidad en servicios turísticos: simulación de escenarios alternativos en empresas de turismo rural.

SANTIAGO ALVAREZ GARCÍA; ANA ISABEL GONZÁLEZ GONZÁLEZ. - El proceso de descentralización fiscal en España, especial referencia a la Comunidad Autónoma del Principado de Asturias

SANTIAGO ALVAREZ GARCÍA. - La tributación de la unidad familiar. Nuevas consideraciones sobre un antiguo problema.

SUSANA LÓPEZ ARES; ISIDRO SÁNCHEZ ÁLVAREZ. - Condicionantes demográficos de la economía asturiana.

CELINA GONZÁLEZ MIERES. - La marca de la distribución: un fenómeno que afecta a distribuidor, fabricante y consumidor.

IGNACIO DEL ROSAL FERNÁNDEZ. - Análisis de la demanda agregada de electricidad en España con series temporales: un tratamiento de cointegración.

JESUS ARANGO. - Evolución y perspectivas del sector agrario en Asturias.

JESUS ARANGO. - Cronología de la construcción Europea.

JULITA GARCÍA DÍEZ; SUSANA GAAGO RODRÍGUEZ. - Programas de doctorado en contabilidad en las universidades españolas: estudio empírico.

MAR ARENAS PARRA; AMÉLIA BILBAO TEROL; BLANCA PÉREZ GLADISH; Mª VICTORIA RODRÍGUEZ URÍA; EMILIO CERDÁ TENA (Universidad Complutense de Madrid). - Aplicación de la programación compromiso a la gestión de hospitales públicos.

Mª DEL CARMEN RAMOS CARVAJAL. - La comarcalización de las Tablas input-output: Una primera aproximación.

LUIS IGNACIO ÁLVAREZ GONZÁLEZ; RODOLFO VÁZQUEZ CASIELLES; MARÍA LETICIA SANTOS VIJANDE; ANA MARÍA DÍAZ MARTÍN. - Orientación al mercado como cultura de negocio y conjunto de actuaciones: Un contraste metodológico para organizaciones no lucrativas.

Mª JOSÉ SANCÉ PÉREZ. - Funciones de los vendedores industriales de los distribuidores independientes. Una tipología realizada en el sector químico.

Mª BEGOÑA ÁLVAREZ ÁLVAREZ; RODOLFO VÁZQUEZ CASIELLES; FRANCISCO J. DE LA BALLINA BALLINA; Mª LETICIA SANTOS VIJANDE. - Evidencias empíricas de la promoción de ventas en los establecimientos detallistas.

BEGOÑA GONZÁLEZ-BUSTO MÚGICA. - La dinámica de sistemas como metodología para la elaboración de modelos de simulación.

BEGOÑA GONZÁLEZ-BUSTO MÚGICA. - Reflexiones teóricas sobre el personal sanitario en el Sistema Nacional de Salud Español.
170/99 YOLANDA ÁLVAREZ CASTAÑO.- Cómo alcanzar el éxito en el proceso de innovación tecnológica.

171/99 YOLANDA ÁLVAREZ CASTAÑO.- La organización del proceso de desarrollo de un nuevo producto.

172/99 RODOLFO VÁZQUEZ CASCIELLES; MARÍA LETICIA SANTOS VIJANDE; ANA MARÍA DÍAZ MARTÍN; LUIS IGNACIO ÁLVAREZ ÁLVAREZ.- Estrategias de marketing: Desarrollo de investigaciones sobre orientación al mercado y marketing de relaciones.

173/99 SANTIAGO R. MARTÍNEZ ARGÜELLES; FERNANDO RUBIERA MOROLLÓN.- Patrones de convergencia regional en los Servicios de la Economía Española.

174/99 JUAN PRIETO RODRÍGUEZ; VÍCTOR FERNández BLANCO.- Are modern and classical music listeners the same people?

175/99 VÍCTOR MANUEL GONZÁLEZ MÉNDEZ; FRANCISCO GONZÁLEZ RODRÍGUEZ.- Transferencias de riqueza y efecto contagio ante crisis bancarias. Implicaciones para las relaciones banca-industria.

176/99 SANTIAGO ÁLVAREZ; MARÍA TERESA ÁLVAREZ.- Impuestos medioambientales y control de la generación de residuos. ¿Hacia una reforma fiscal verde?

177/99 JAVIER SUÁREZ PANDIELLO.- Rationality and rent seeking in the spanish regulation of professional soccer.

178/99 JAVIER SUÁREZ PANDIELLO.- Determinantes políticos del gasto público en España.