

# **The Effects of Schooling on Earnings and Employment in the Labour Market for Conductors**

## **A Social Capital Perspective**

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## **Abstract**

Traditionally, schooling has been considered by cultural economists as a way of investing in human capital, therefore subject to cost-benefit analysis. However, due to the specificity of artists' labour market, it was found that human capital applies only weakly to artists' decisions of investing in formal education, mainly because of the role played by innate ability and the fact that the informal way of improving skills is still prevalent. Therefore, it was hypothesized that schooling has rather more social capital features than human capital. In this respect, when schooling was operationalized conforming to the two dimensions of social capital, reproducing some of the social structure and facilitating the accomplishments of conductors' goals, it was found to have significant effects over their earnings and employment status. This finding indicates that social capital can be translated into economic terms and therefore is subject to investment and accountability of its rates of return. Moreover, due to its embeddedness in social networks and capacity to providing access to resources, the social capital perspective raises equity issues and justifies the policy debate of private finance versus public finance of schooling, on the ground of the fact that social capital seems to be a private good (i.e., excludable and rivalrous). As such, it is more likely that social capital constitute a complementary theory to that of human capital rather than rival. The combination of different proportions of these two forms of capital may produce different outputs and social capital might represent a mediator in the effects of human capital over earnings. Thus, further research may provide more insight into the path of capital flow.

**Keywords:** schooling, social capital, earnings, employment, Conductors Guild

## Chapter 1: Introduction

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This chapter introduces the research question of the master thesis and its relevance for conducting profession translated to specific theoretical concepts of Cultural Economics. Later on, an insight concerning methodological debates of the discipline is provided and the choice of research method is explained. Furthermore, an overview of the sources used for the research is presented, followed by an inventory of proposed objectives. Finally, this chapter ends by presenting the structure of the whole thesis, giving a glimpse on the content of every other chapter.

### 1.1 Research question

The conducting profession is well known in the musical world as one that requires complex skills. *Grove Music Online* (2008) names three basic ones: beating tempo, deciding on the type of interpretation and administrating the musical ensemble. While beating tempo is mostly seen as a skill that can be acquired through physical exercise and practice, deciding on the type of interpretation requires complex artistic skills (e.g., complete knowledge of a piece, harmony, orchestration etc.). Moreover, the administrative part is as important as the previous two, because the supply of the artistic product in this case relies on a collective enterprise and secondly it has to be ‘sold’ to an audience. To sum up, for the conducting profession the core of artistic skills seems to be organized around the decision concerning the type of interpretation and beating tempo, while administrating the musical ensemble requires some entrepreneurial skills and it is also a mean of transmitting the conductors’ vision to the orchestra and to the audience respectively.

From a historical point of view, both-, informal education (e.g., private lessons) and formal education (e.g., studying in a conservatory) were used by musicians for acquiring such skills, but in different proportions over time. However, in the case of conductors it is only recently (at the end of the twentieth century) that a study program awarded with a diploma in conducting was introduced in conservatories, usually at a graduate level (master or doctorate). Since a conductor’s training was mostly done in informal ways until the end of twentieth century, it became relevant to question the importance of schooling (formal education) in ones career.

Scherer (2004, 2006) runs a content analysis on 646 composers born between 1650 and 1849, and regarding their training he finds most common patterns to be within-family training and



private lessons. However, a sharp rise in the frequency of formal conservatory training was noticed for those born between 1800 and 1849 in together with a decline in occurrence of training held in churches. These tend to suggest a transition from a music market that was greatly endorsed by noble houses throughout Europe (who were competing for prestige) to a more market-oriented one, on account of the new social, economic and cultural transformations associated with the industrial revolution. These are transformations that bring new requirements and challenges for artists, such as performing in larger venues with larger ensembles and composing pieces that are suitable for the new environment with its new cultural, national and social realities.

Conducting as a profession in its current form seems to have been crystallized in that period of time. It flourished from those new necessities, many of its innovations having been settled then. However, the old trend of training with a maestro (talent attracts and introduces talent) seems to continue until the present day. Since the formal conservatory training was introduced later on, the question is whether schooling has any effect on a conductor's career output at the present moment. Therefore, it becomes interesting to address the main research question: *how much from the variance in earnings and employment can be predicted by formal education (schooling)?*

Usually, formal education was seen by cultural economists as part of their *human capital* and as any form of capital, subject to investment. Thus, traditional cost-benefit analysis became applicable to this type of capital formation and formal education has been included in earnings functions which attempt to measure someone's performance on an input-output basis. However, since valid data from longitudinal surveys, which permits the falsification of such theories, are hardly obtainable, one does not have any choice but to reduce his ambitions and try to get the maximum from cross-sectional surveys. Reviewing the research in human capital theory and its application to artists' labour market, Towse (2006) claims that schooling has little effect on earnings and employment in the case of artists and that schooling has more features of *social capital*, rather than human capital. All these are due to the particularity of artists' labour market and consequently the question 'why so' becomes salient. As such, the main goal of this research is to test if indeed schooling as investment in *social capital* is a 'low' predictor for earnings and employment differentials in the case of conductors and to understand its causes. An elaboration on all the concepts mentioned above can be found in the chapters that propose the theoretical framework for this master's thesis.

## 1.2 Methodological perspective

As defined by Seale (2006), methodology consists in a set of fundamental and regulative principles specific to a certain discipline (i.e., its object and how it can be investigated). Towse (1997) considers that while there is no single methodology or paradigm in Cultural Economics, what we can observe are some “distinctive strands” consisting in the application of economic theory to the art field. One of these strands is represented by *microeconomic analysis* in which *artists’ labour market* studies are placed. In a different taxonomy proposed by Throsby (2006a), artists’ labour market studies fit in the area of *behaviour of individuals*. To understand why these different classifications occur, Blaug’s (2001) distinction between analytical and empirical progress in Cultural Economics is of great help. By analytical progress, he means the development of specific theoretical concepts and by empiric progress, more accurate empirical tests. In this perspective Towse’s classification seems to prioritize the analytical side, and Throsby’s the empirical.

## 1.3 Research method and epistemological perspective

For this research project the method used is quantitative and the epistemic position is that of hypothetical-deductive scheme. Quantitative method refers to the way data was collected and analysed. As Seale (2006) states, a hypothetical-deductive scheme implies the existence of an initial *law* which is mainly a theory covering phenomena of a certain type (human and social capital theory in our case), *initial conditions* referring to the necessary circumstances needed for the event to take place (population, time and place of the survey, sampling etc.), and the *event to be explained* (see the above research question). Nevertheless, qualitative researchers (Morse & Field, 1998; Merriam, 1998) would claim that even in quantitative studies at least in the phase of building the theoretical framework, formulating the hypothesis and evaluating the findings, a process of interpretation takes place, which is essentially of a qualitative nature. Thus, the traditional division looks rather scholarly constructed than corresponding to a reality that can be found in the research field. Moreover, the research question tends to suggest a causal approach to the relationship between variables included in the research design and to measure the predictive power of schooling over earnings and employment in the labour market for conductors. This will be done using regression analysis and a few path models will be constructed.

#### **1.4 Sources**

The main sources for the theoretical framework are the relevant studies published in Cultural Economics in the last forty years, while for the empirical part of this research, a survey on the members of the American organization Conductors Guild was conducted. The Conductors Guild was founded in 1975 under the patronage of the American Symphony Orchestra League and became an independent entity in 1985. It has approximately 1900 members each year, conductors or individuals with a direct professional interest in conducting, for the most part U.S. residents, but also an important number of members from outside the U.S. Due to the resources made available and the support of the board of Conductors Guild, the online survey was completed in a relatively short period of time (1-20 July, 2008), if the processes of preparation and the pre-test from the previous months are excluded.

#### **1.5 Objectives**

A few objectives were considered in the development of the present research project. First, to explore the literature from cultural economics related with the topic as in depth as possible and second, to empirically test the proposition presented above as research question and unfolded in sub questions in Chapter 4. The third objective is to disseminate the findings of this research as much as possible. In this sense the survey participants, who consisted in Conductors Guild members, were co-interested to participate. <sup>1</sup>

#### **1.6 Structure**

Concerning its structure, this thesis is divided into two main parts. The first part presents the empirical and theoretical findings of research in Cultural Economics, mainly in the area of artists' labour market. Consequently, Chapter 2 deals with the issue of artists' training and education and the implications of when they are treated as an investment, while Chapter 3 provides an insight on earnings functions, its benefits and limitations when applied to artists' labour market. The

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<sup>1</sup> After this thesis will be completed, it will be made available on a website, together with the survey results. The website will also contain a forum of discussion in which the conductors and those interested can comment on the results and offer suggestions for further research.

second part revolves around an empirical research conducted on Conductors Guild members through a survey, with the purpose of answering the research question specified above ( see section §1.1). Accordingly, Chapter 4 elaborates on the research design and unfolds the way this was planned and conducted, in Chapters 5 and 6 data analyses is presented conforming to the sub-questions discussed in Chapter 4, and finally, Chapter 7 is dedicated to conclusions and includes the implications of the research findings, the limitations and the suggestions for further research.

## Chapter 2: Training as Investment

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An analysis of artists training decisions has been done in this chapter and the economic implications when it is seen as a form of capital, therefore subject to investment. Section §2.1 describes the basic human capital theory with its variant sorting models; section §2.2 details the functions of training, namely its role, content and certification; section §2.3 elaborates on students expectations from training; section §2.4 on incentives for training decisions when is considered part of human capital and the incentives for supporting training; in section §2.5 other contributions from the artists' labour market studies are presented, such as the special role of talent and creativity in this labour market and the implications of the superstars phenomenon, followed by a presentation of the copyright law and reproducibility issue. The chapter continues with section §2.6 which approaches schooling and training as part of social capital. It also tried to entangle whether schooling and training are better predictors of earnings and employment differentials than when seen as part of human capital. Finally, section §2.7 deals with the inferred conclusions.

### **2.1 Human capital**

According to Blaug (1992: 206-209) the human capital theory was born in the early the 1960s with the works of the Chicago School (T. Schultz, G. Becker, J. Mincer, S. Rosen), and as a research program it has been carried on until the present. Giving an account of the main studies published on the topic, Blaug considers the human capital research program as a subprogram within the neoclassical and a way of applying capital theories to diverse economic phenomena. Since the birth of human capital theory seems to coincide more or less with that of cultural economics as a discipline, it became possible to test the human capital theory in the field of art and culture.

However, Towse (2006: 867-868) will argue that the cultural economics studies of human capital differ essentially from those of labour economics due to the exceptionality of the former. Cultural economics have been interested so far in the influence of innate ability and talent on earnings and has been less concerned with the ability acquired through schooling, this mainly because artists' labour markets tend to behave differently from other markets. This is usually

considered the area where cultural economics can bring its special contribution to human capital theory. Furthermore, the distinctiveness of the artistic field could be better understood if we mention a few of the specific interest topics: the importance of artists training and experience gained on-the-job, the concern with utility and reputation that alters their incentives structure, the copyright law as a mean of protecting artists' earnings etc. With reference to training as investment in human capital, the aim of this chapter is to present all these findings, with the purpose of testing later in the empirical part if schooling has indeed a small influence on conductors' earnings and employment status, as the previous studies claim.

### **2.1.1 Basic theory**

As defined by Throsby (2003: 166) human capital refers to the inherent characteristics of people which make them productive. It is well known, for example, that improving skills by training and experience can improve labour productivity in time. This is how it became possible to refer to education as an investment in human capital and that is why the traditional cost-benefit analysis has been applied to this type of capital formation. Towse (2006: 868) identifies two main features of human capital: inalienability and the possibility to increase it by investment, arguing for the ambiguity of the concept. First of all, with reference to inalienability, Towse views that human capital can be separated from artists' labour through reproducibility combined with copyright law. Second, human capital is an ambiguous concept, due to the difficulty of pinning down the exact influence of its different aspects (inherited characteristics, acquired skills, tacit knowledge and innate ability) on productivity and earnings power.

Becker (1993: 29-58) has introduced the distinction between on-the-job training, schooling (formal education) and other forms of knowledge on the one hand, and general and specific training on the other hand. According to Becker, on-the-job training is of a particular importance because in this way productivity becomes influenced by the job itself; schooling is provided by institutions specialized in the provision of training; and other forms of knowledge could be, for example, the information available on the market (i.e., prices, wages etc.) that cannot be provided by school or the employer. The difference between general and specific training seems to rely on the fact that the former can still increase productivity when an employee is changing jobs from one company to another, while the latter can increase productivity only to that specific job, and not elsewhere. Is it worth mentioning that schooling can offer both, general and specific training.

For example some schools are specialized in a certain area (e.g., mechanics), offering only this type of training, while some of them can offer a more general one (e.g., sciences).

Of particular importance is the remark of Blaug (1992: 207) which specifies that training is seen as investment rather than consumption in the case of human capital theory. This mainly because for Becker (1993) the analogy between human and physical capital is essential, and he considers that individuals will invest in their human capital up to the point that they will be covered by future earnings, over one's lifetime. Nevertheless, Blaug (1970) argues that education may be seen as consumption good rather than investment, as it is considered also by Abbing (2002, 2003) as being the case for artists' labour markets. This means that students might see education less (or not only) of a mean of increasing future earnings and deriving other forms of satisfaction than the monetary one. This sort of satisfaction was called by Frey (1997) 'psychic income' and it seems to be specific mostly to artistic occupations, scientists or academic careers. Psychic income might include for example the reputation you get amongst your peers, family and other social environments and recalls the notions of intrinsic and extrinsic motivation from psychology.

### **2.1.2 Sorting models**

However, conforming to Towse (2006: 870-871) the Chicago School version of human capital theory receives an important criticism from sorting models theory, which also sees a positive relationship between investing in education as a way of increasing earnings. The term 'sorting' was proposed by Weiss (1995) to include both-, screening hypothesis and signalling. According to this model, employers screen for the qualifications and the degrees workers obtain via schooling, while the latter are signalling through the same means to the former, due to their ability in acquiring such degrees. Moreover, due to asymmetrical information, workers are well aware of their productive skills, while employers are not. The asymmetric information refers here at the difference in knowledge about ones skills level (between employers and employees) and the limited signalling power of schooling for employers. Furthermore, the high-educated workers seem to come from families with higher socio-economic background and a higher degree does not necessarily imply a higher productivity, therefore the asymmetric information is more likely to be involved.

Becker (1993: 8) refutes the screening hypothesis on the grounds that the significance of the private rate of return to education is not affected and there are a few empirical impediments in the way this theory is tested. He concludes that schooling-as-screening may occur only in systems with imperfect information and it is an expensive screening device, while on-the-job training and an intensive interview might be less expensive. That is why, conforming to Becker, schooling-as-screening has only a relatively small influence in determining earnings differentials. Towse (2006: 871) argues that while this might be the case for the USA where students have to pay for their higher education, it is less true for European countries where education is subsidised or at very low costs, some of them offering even grants and scholarships to stimulate the attendance of such education programs. This seems to be illustrated by Abbing (2002, 2003) for the case of the Netherlands, while Towse (1993), researching classical trained singers in Britain, finds that employers rely less on certifications via schooling and develop their own screening devices (i.e., auditions, awards and prizes in competitions etc.).

## **2.2 The function of training**

### **2.2.1 The role of training**

Furthermore, it remains difficult to prove that human capital can be increased by investment in schooling. Towse (2006: 880) addresses three main points regarding this aspect. First, even colleges have strict requirements at admission and due to the fact that the information regarding quality is missing in the artists' labour market, they fail in making a proper selection. Second, the same problem arises when it is about pinning down the rate of success of colleges in preparing students to work in the arts. Finally, as shown by Gurgand & Menger (1996), due to the prevalence of short-term contracts, self employment and the existence of only a few regular positions, the uncertainty of demand for artists occurs in this labour market. It follows that in artists' labour market it cannot be said that schooling indeed improves human capital, and new hypotheses over the role of schooling need to be tested.

### **2.2.2 The content of training**

Distinguishing between the 'art' and the 'craft' element of artistic training Towse (2006: 881) considers that formal training is rather useful for the development of the 'craft' element, and has



mainly an informative purpose concerning the ulterior entrance in the labour market. Especially in performing arts (music and dance) people start to train in early childhood and at the moment of college entry, they already have years of experience and practice behind them. So school cannot do very much from this point of view, but it can offer students the possibility to improve their 'crafts': training to present themselves better, offering a forum for discussing the aspects of profession, networking possibilities, and of course, information on employment after graduation. This informative aspect seems to be of a particular importance in a labour market where uncertainty regarding all its aspects is greater than in others. Since the students are now informed, the less talented and less motivated may drop and switch professions, giving colleges an essential sorting function.

Nevertheless, Towse (2001) found that approximately thirty percent of the artists enter this labour market without formal training or a certificate, and more surprisingly, without earnings penalties. The causes for not receiving specialist training in the arts might be, conforming to Towse, either the fact that they decided to become artists after they graduated in other fields, or that they regarded the content of artistic training as irrelevant. She sees these findings as hostile with both-, human capital and sorting models. However, this is the case if the models take into account only the formal education and do not include the informal one. A degree obtained at an important university can be less important than the private lessons with a talented and dedicated artist or teacher over the course of one's formation (from the point of view of skills acquirement). This might explain also the absence of earnings penalties for not having a formal training certification in artists' labour market.

### **2.2.3 Certification**

According to Towse (2006: 881-882), because certification is mostly correlated with formal education, the diplomas and degrees, even though they represent rewards to the students for their accomplishments in following the curriculum, are less important in artists' labour market. The schools might have different criteria when selecting and allowing students to graduate. Even though candidates might have less talent, colleges might want to increase their attendance or income from the paying members, leading to an oversupply of artists. Consequently, employers cannot trust these awarded degrees and they develop their own screening mechanisms to find the right employees, as specified at the end of section §2.1.2.

## **2.3 Expectations from training**

### **2.3.1 Students' expectations**

As Towse (2006: 882) suggests, in a labour market where there is a wide dispersion of earnings and jobs are changed frequently, it is hard to get objective information and to guide students' choices and expectations. It is more likely that they overestimate their own talent and creativity. The scarce information, in combination with the above mentioned overestimation of one's abilities, may lead to a higher rate of disappointments amongst arts graduates. It seems that lately the schools have started to supply education programs in business administration and career management for this category of students, but as Towse (2001) observes, somehow they are not very successful in attracting the targeted population.

Moreover, the value system of artists' and their related labour markets is also exceptional. It is well known that artists tend to choose utility over monetary rewards. As Throsby (1992) shows, artists will spend time in a non-artistic activity only as long as they get enough money to allow them to spend more time in artistic activities, even if non-artistic activity brings more income. Furthermore, conforming to Jeffri & Throsby (1994), artists will choose work that is challenging over repetitive one, no matter if the last one increases earnings. This concern with utility is considered by Benhamou (2000) as very important for improving reputation, which is of a particular significance in a labour market where self-employment is more prominent than in others.

### **2.3.2 Expected income**

As Towse (2006: 879-880) would argue, it is important to know if people enter an artistic profession informed, well aware of the private rate of return to investment in human capital. This rate of return is usually determined by the costs of schooling and earnings and it is assumed that people will invest in their human capital up to the point their expected lifetime earnings will cover their investment in training. Nevertheless, Throsby (1992) reveals a different sort of logic concerning artists' labour market. His findings show that artists are usually supplying two different labour markets, an arts market (where they try to accomplish their artistic and aesthetic goals) and a non-arts one (where they try to get some extra income to cover the increasing costs

of the arts market). Furthermore, they will spend time in the non-arts market only as long as they get enough money to allow them to spend more time in the arts one, even though the non-arts market brings more income anyway.

Still it is not clear if in the arts there are indeed lower expected lifetime earnings, combined with higher indirect costs. Conforming to Towse (2006), cross-section studies assume the same age of retirement for all professions. Artists might retire later than other workers and some of them may work until the end of their lives. Some of them can produce earnings even after death, as in the case of the royalties from copyright. It is this difficulty (in pinning down how much artists do invest in training during their career and how much they do earn) that does not let us have a clear picture concerning the private rate of return. Even so, Towse (1993, 2006) finds that the direct cost of training singers in Britain is higher than the average cost of higher education in general. Moreover, due to the free access of training in Europe and the scholarship system in US, the comparison between the longer length of training in performing arts and other arts and professions tends to add more complexity to the issue. The multiple job-holding and extra income from non-artistic jobs, combined with a longer retirement period, might overcome the higher average costs (and the late entrance in the job market) for education in artists' labour market.

## **2.4 Incentives for training**

### **2.4.1 The effects of human capital on training decisions**

So far, Towse (2006: 883-884) finds arguments for both-, human capital theory and sorting models as bringing important contributions to the understanding of artists' earnings and career choices, even if they perform less than in other labour markets. Talent seems to be one of the key factors in determining wages and career development in the arts; however, it has a limited explanatory power. As Blaug (1985) observes, formal education has the merit of giving the student a space for socialization and professionalization, to improve his skills and to screen the labour market for the best opportunities. Moreover, informal education (apprenticeship) still seems to play a prominent role in the forming of an artist. It has been the most important form of training until the 19<sup>th</sup> century and has been replaced by private lessons nowadays.

From a sorting models perspective, schooling is also important. It gives the student the opportunity for his first work assessment and provides him with general training. If employers

seem to have a difficult position in screening due to informational problems, schools are still screening at the entrance in a way or another and they award a degree on the basis of attendance and acquirement of the basic skills. Furthermore, as shown by Wijnberg (2003), there is also a screening device for talent, which is represented by the awards and prizes gathered in different competitions.

However, one aspect of schooling seems to be insufficiently explored empirically, namely that of social capital skills, and Towse (2006) raises the question if social capital can be treated as investment. Tacit knowledge is present in every artistic profession and especially in the cases of dance and music; early childhood education and family background may be seen as investments in ones capital. Seaman (2003) observes that from this point of view art and sports behave similarly. The role of trust and reputation are also other essential features of social capital. Even though they are very often mentioned by cultural economists, convincing empirical tests still remain to be done. A more in-depth analysis of social capital will be conducted in the section §2.6 of this chapter.

#### **2.4.2 Support for training**

Abbing (2002, 2003) and Towse (1993) claim the existence of an oversupply in the arts, questioning the benefits of public finance. Towse (2001, 2006) considers that public policy debates rather give credit to the argument of equity than to that of efficiency, partly because it is hard to define efficiency in arts and uncertainty still surrounds the chances of success. Moreover, the social objectives might be opposed to economic efficiency and they might prioritize the equality of opportunity. It follows that the social rate of return is less important than access, leading to an oversupply and its associated consequences (disillusion and disappointment of those entering such a market). However, society might benefit from this oversupply (and the implied competition), raising the quality of artists and their work. In this sense, conforming to Pignatoro (2003), of a particular help in defining efficiency could be the design of performance indicators, which is not so easy measurable. With reference to these, he defines for example output as distinct from outcome. The output represents the direct product of artistic activity that is easily quantified (measured in volume) in relation with the input of resources (e.g., number of concerts conducted in a season, earnings from box office), while in art production the outcome is more

goal oriented and it attempts to measure the impact on the targeted population (e.g., increasing art education of children).

## **2.5 Other important contributions in understanding artists' training decisions**

### **2.5.1 Superstars, talent and creativity**

Throsby (1992), using data on Australian professional artists, claims that the traditional human capital model does explain the income differentials, even though less than in other professions, naming as cause the prominent role of innate talent and creativity in arts. It is this difficulty in specifying the role of creativity and talent in artists' labour market that lately has captured the interest of cultural economists, these two being considered key factors for understanding this labour market.

Rosen (1981) and Adler (2006), with reference to the superstar phenomenon, investigate the role of talent in skewing the distribution of earnings, though they do not specify how talent could be measured in arts. According to this theory, a small difference in talent leads to magnified differences in earnings (i.e., the apparition of superstars). The superstars are professionals that dominate their field, are highly talented and highly rewarded. The explanation for this seems to rely on two causes. First, from the perspective of supply, this is facilitated by the emergence of media technology, which led to the expansion of scale economies and the possibility of reaching greater markets. While giving the example of two star opera singers from different periods of time, and their earnings (Elizabeth Billington & Luciano Pavarotti), Rosen (1981) blames the differences between the two on the capabilities of the new technologies. Second, from the perspective of demand, consumers show a constant preference for a greater talent rather than for a lesser one, and consequently there is an imperfect substitutability between these degrees of endowment, which means the consumer will always prefer the one of greater talent to the one of a lesser. It is this combination of supply and demand, media technology and consumers preferences, that influenced the appearance of the superstars phenomenon.

Towse (2006: 877) equates the role of creativity and talent in artists' labour markets with that of innate ability in human capital theory, both reducing the costs of investment in schooling, leading finally to greater productivity. She finds that ricardian theory of rent is applicable in this case, seeing the role of talent and creativity in earnings differentials in arts as equivalents of land

fertility in explaining rent differentials. However, this supposition is arguable since a highly talented person is more likely to require an increase of investment in schooling and training, rather than a decrease of investment, as he or she mainly wants to make the best of their praised talent. Moreover, one cannot venture a prediction concerning his or her future productivity. It is obvious that while human capital theory is prioritizing an explanation from the supply perspective (rents to innate ability), Rosen's model is prioritizing the demand perspective. A comprehensive model to include both-, the demand and the supply perspectives are still to be expected in this research area.

It is considered that usually human capital is granted in conjunction with labour, as it is the case with live performances. The performer is supplying his talent live, therefore leading to limitations in time availability, resulting in rent determined by demand. This seems to be the case for the singer fees as suggested by Towse (1992). Even so, in the case of supplying talent and labour via reproductive forms (as in Rosens' model), larger markets are reached and earnings are possible also after someone's life span, altering one of the main characteristics of human capital, namely the inalienability. This aspect will be developed in section §2.5.2 below.

Thus, it becomes relevant to define creativity and talent on the one hand, and what is given and what is acquired on the other hand. As defined by Tschmuck (2006: 195) creativity is "a cognitive process that brings about novel and useful products and services, with the socio-cultural environment functioning either as promoting or hampering creativity". There are two dimensions in the above mentioned definition: one with reference to originality (seen as a combination between novelty and usefulness) and the other one emphasizing the collective dimension of it, as a collective action process. However, cultural economists have not always seen creativity in this manner. Towse (2006) was stating that usually creativity used to be seen as an attribute of people working individually and producing original works of art or ideas. The social aspect of creativity was not signalized until recently, by Seaman (2003) for example, who parallels team sports with team work in the arts, or Wijnberg (2005) who emphasizes the importance in the reception of creativity. As Seaman noticed, in sports talent is visible and more measurable when compared to arts, and people not necessarily prefer a most talented one, but rather a more familiar sportsman. This reception process seems to be of a particular importance for the exploitation of creativity by different art organizations and industries or to be encouraged via policies.

With reference to the musical talent and how it can be measured, Seashore (1967: 302-311) mentions a few features that better defines musical talent: heredity, native capacity, acquired ability, ability to learn, character, amount of achievements etc. However, developing and cultivating talent implies training. While it might be more on the side of given and innate features, talent is a must for someone who wants to be creative. Thus, talent becomes an instrument for creativity. This distinction could ease and bring valuable insights in the work of cultural economists, if they intend to measure talent and creativity and what is given and what is acquired. Since talent and creativity are necessary inputs to satisfy demand in artists' labour market, it is worthwhile trying to pin down their economic value. This was attempted by Throsby (2006b), who found some positive evidence concerning the role of creativity and talent in earnings differentials. Since Throsby operationalized in retrospect (from some of his previous data sets) talent and creativity as being synonymous concepts, his findings needs to be accepted with scepticism.

### **2.5.2 Copyright law and reproducibility**

With reference to inalienability, which is one of the characteristics of human capital, the reproduction (ability to reproduce artworks) in combination with copyright law alter this property of human capital, namely the one that human capital cannot be separated from labour. According to Towse (2006: 888), "copyright law protects authors and performers by establishing statutory property rights that enable them to control the exploitation of their works, granting them the exclusive right to authorise their use". Furthermore, she considers that the economic purpose of copyright is to encourage creativity and disseminate artworks. Although the declared purpose is this, in reality there is no empirical evidence that copyright has any positive effect on creativity. Moreover, as Tschmuck (2002) shows, in the case of music production in Vienna of late eighteenth century, copyright is not an essential condition for creativity.

Nevertheless, the evolution of copyright law is strictly related to the mechanical ability of copy making, and from the printing press until modern day digitalization, this capacity called reproducibility has been increasing dramatically. This way, new and larger markets were created for the copyrighted work, which in turn became alienated from its creator. The copyrighted work is usually marketed by publishers or record companies, which previously sign a royalty contract with the authors. On the basis of this contract the artist receives an advance, sharing or sales

revenue, usually fixed, between ten and fifteen percent. Once this royalty contract is signed, the artists have little control over the exploitation of their work. Thus, copyright gives the artist the opportunity to earn from his or her investment in human capital, but this does not necessarily guarantee that this will happen nor does it guarantee the amount of income he or she gets. This depends only on market forces. Moreover, copyright royalty income seems to be greater for superstars than for ordinary artists, especially due to what Caves (2000) called the difference in bargaining power.

Towse (2006) suggests that copyright depends also on how labour market is organized. For example, in the case of ‘works for hire’, copyright is conferred to the employee when the employer orders him to create a specific work. This seems to be the case for the Hollywood script writers, and in these sorts of cases, the less full time employment available, the more important is the copyright law for free lancers.

However, the exploitation of artworks via copyright law has a double sided effect, for on the one hand it alienates human capital from the artist, and on the other hand the publishers acquire a durable asset. As Towse (2006: 889) states, this joint effect leads to the “creation of capital assets in the hand of the firms in the cultural industries, that may be traded and transferred in mergers”. It seems that this joint effect might guide the preference for recordings rather than live performances, to copyright royalties rather than a fee. Moreover, copyright law alters the duration of human capital and artists’ decisions regarding their supply, and it is expected that the higher the royalty income, the fewer hours of work they would do in a certain time interval. This is the reason why one should be sceptical concerning the purpose of copyright and its capability of encouraging creativity.

To sum up, the combination of copyright law with reproducibility are important in artists’ labour markets because they alter one of the human capital characteristics which is inalienability and can reduce the period of time that investment in human capital can be recovered in. These properties bring human capital closer to physical capital and conforming to Towse (2006), artists’ labour market could be the initiator of a more general trend. Moreover, she suggests that copyright might work as a motivational factor for artists, offering a symbolic recognition for their status. Anyway, as presented above, there is no guarantee that artists will cover their investment in human capital via copyright, and for the majority this does not happen. The benefits seem to be on the side of superstars and their partnering companies. Furthermore, what Towse suggests as



being a motivational factor (the superstars phenomenon in combination with copyright), might as well be responsible for the oversupply and inefficiency. Landes and Posner (1989) consider that strengthening copyright law might increase the costs of production and taking out of the public domain a lot of artworks and the companies will benefit more than artists will. Nevertheless, as Towse (2008) would suggest, concerned more with policy issues and subsidization, cultural economics did not progress that much in researching copyright, maybe also because it was not seen as a mean to encourage creativity. Regulation in the sense of spreading the benefits for the other artists as well and not only for the superstars and their related companies might be one of the possible future trajectories.

## **2.6 Social capital**

Throsby (2003: 169) sees the concept of social capital as overlapping partially with that of intangible cultural capital and represents a ‘cultural ecosystem’ that can be translated as “shared cultural networks and relationships, however defined, that facilitate cultural, social and economic interactions between members of the group.” According to Coleman (2000: 16), social capital is best defined by its functions, which arguably have two common characteristics: they contain some aspects of social structure and they facilitate the actions for actors. The question is what contribution can social capital bring to understanding artists’ labour market and more specifically, what is its role as incentive to acquiring skills and competences?

As Towse (2006) mentions, if social capital was a public good (i.e. non-rivalrous and non-excludable) there would be no incentives for the artists to invest in themselves and in consequence training should be collectively financed, but if the benefits can be appropriated (as in the case of human capital), then there is an incentive for artists to invest in themselves. In this sense Glaeser, Laibson & Sacerdote (2002) have applied standard economic analysis to the formation of social capital. Conforming to them, individuals when consider to invest in their social capital, choose the optimal level depending on the opportunity cost of their time, model that is similar with the human capital one. *It follows that social capital is not a public good and there is a strong connection between human and social capital, this being an area where further research is needed.*

According to Towse (2006) if investment in human capital is similar with that in social capital then it is necessary to pin down the private rate of return for each of them, mainly for

policy purposes. The most important aspect of cultural policy is to discover the best way of investing in the supply of creativity. While human capital theory would argue that subsidies in formal training would raise productivity and a basic income support would raise artists' earnings, social capital might claim that developing social skills, building reputation, gaining experience and joining professional networks might be more important than schooling. While some social skills might be acquired in specialized colleges, Towse considers that it is more efficient to invest in work experience on the job, as a form of investment in social capital. Nevertheless, it is necessary to pay special attention in this case to what constitutes social capital and what constitutes human capital and more accurately, to how we can operationalize work experience as a means of gaining reputation via networking (social capital) and how we can do it as a means of investing skills acquisition (human capital).

However, social capital and human capital are more likely to be formed side by side and if the private rate of return for the both can be established then it can become an incentive for investment. Towse (2006) draws a few policy implications for the social capital model and suggests a few effective ways of investment as: subsidies to colleges, agreements with trade unions and professional associations, restricting the number of admitted students in colleges, apprenticeship schemes and artist-in-residence placement. Furthermore, she states that human, social and cultural capital leave out the issue of innate talent and do not solve the dilemma of how to improve creativity.

## **2.7 Conclusions**

As we can see human capital theory and its complement sorting models performs less when it is about explaining artists' decisions of investing in their training. In artists' labour market there is a great uncertainty about the role of training, its rate of success and quality, as well as the demand for it. Distinguishing between the 'art' and 'craft' element, schooling seems to be valuable rather for the cultivation of the 'craft' element providing students with a forum for discussion about their future career possibilities and since there are no earning penalties for not getting formal training, the related certification is less important in this labour market. Students have higher expectations when entering such a labour market, partly due to the system value inoculated during their training by social networks or families and they tend towards the preference of utility over the monetary rewards. Regarding income, it was found that artists serve two labour markets,

a non-arts and an arts one. The work-preference model will assume that artists serve the non-arts market until they earn enough to cover their costs in the arts market, and not more than that. In this respect, some cultural economists will argue that governments favour arguments of equity rather than those of efficiency when supporting the arts, and this leads to an oversupplied market. The oversupply of artists might lead to asymmetrical information between employers and employees, the former ones having difficulties in screening the right candidates by their formal education degrees, therefore developing their own screening devices. What is missing in human capital theory is considered to be the understanding of talent and creativity and their role in artists' productivity. That seems to be very important if we consider the superstar phenomenon, where consumer's preference is always for artists with greater talent rather than less, the most talented ones also earning the most due to the new development in technologies and the consequently increased reproducibility and copyright law. Copyright alters one of the basic properties of human capital, that of inalienability and is a forerunner in illustrating how human capital transforms in physical capital. However, schooling in artists' labour market seems to have more social capital features rather than human capital, containing some aspects of the social structure in which artists activate and facilitating actions for them. What is important is therefore, to establish the private rate of return for schooling when operationalized as social capital. *With this research project the intention is to measure the effects of schooling on earnings and employment differentials when schooling is operationalized in the line of the two dimensions of social capital mentioned above (as containing some aspects of social structure - level of degree/diploma and as facilitator for action – the amount of sources for financing training).*<sup>2</sup>

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<sup>2</sup> For more details about the operationalization of schooling and other variables see Chapter 4, while for more details about theoretical developments concerning artists' earnings and employment see Chapter 3.

## Chapter 3: Earnings and employment

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This chapter discusses earnings functions and their applicability on artists' labour market. Section §3.1 introduces us to the way that economists used to measure the influence of human capital on earnings differentials, while section §3.2 gives account of a few earnings functions adapted to artists' labour market from both-, census and purpose built surveys. Other measurement issues will be discussed in the same section, while in section §3.3 a few methodological issues will be debated. Finally, this chapter ends with some conclusions that attempt to underline the relevance of earnings functions and employment for the current research project.

### 3.1 Estimation

According to Towse (2006: 871-972) earnings provide the most important information about human capital, mostly regarding returns to investments and the cost of time for investing in human capital. The age earnings profiles usually provide us with information on lifetime earnings. It is widely accepted that compulsory education stops around sixteen and from that moment on the individual starts to earn. That does not mean that schooling cannot continue afterwards, but if it does it will include an opportunity cost. Regarding earnings, it is assumed that they increase on entering in the labour market, flatten in the mid career and decline close to retirement.

Nevertheless, as mentioned above, investment in human capital does not stop at the moment of entering in the labour market. On-the-job training becomes a priority now and provides the employee with experience that is gained through learning-by-doing and this experience increases with age. Conforming to Mincer (1958), with the purpose of reaching higher earnings, the employee might invest in formal on-the-job training as a means for substituting schooling. Moreover, he or she might choose to have lower earnings and concentrate on increasing his or her experience during on-the-job training. The resulting shape of the age-earnings profiles is therefore determined by the combination between the costs of education and on-the-job training. The combination between earnings forgone and lifetime earnings, might reach an 'overtaking point' where age-earnings profiles must cross and where lifetime earnings will cover the costs of the investment. However, as Towse (2006) observes, even if this model allows the consideration

of family background and financial constraints, does not solve the problem of ability and self-selection biases.

Mincer (1958) offers an earning function that tries to measure the supply of educated labour and to estimate the internal rate of return to education:

$$\log Y = \log Y_0 + rS + b_1 X + b_2 X^2 + u, \quad (1)$$

where  $\log Y$  represents the income,  $\log Y_0$  is the constant term for the value of initial human capital (e.g. the effects of innate ability or family background),  $rS$  measures the rate of returns and the length of schooling,  $b_1 X + b_2 X^2$  refers to the effects of experience, while  $u$  represents the error term. But the ideal data (in the form of longitudinal information on lifetime earnings and tuition expenses) is usually not available, so the above earning function is usually tested in panel data, which will always include a bias in estimation. Thus, Towse (2006: 872-873) presents a few simplifying assumptions necessary when using available data: entering the labour market takes place immediately after the completion of studies, the working life of an individual is independent of his years of education and that the only cost of education consists of earnings forgone. However, the use of this aggregate cross-section data raises problems in estimating the ability bias, and Towse considers that this can be overcome by gathering information on family background and by measuring abilities via a standard test.

A way of separating the role of innate ability and human capital investment on earnings differential is offered by Rosen (1987) in his study on identical and non-identical twins. According to Rosen, one-third of earnings differential is due to random events (luck), one-third to personal effects (such as ability and health) and one-third to the difference in human capital investment. This seems to be of particular importance for artists since in this labour market talent and luck might play a greater role than in other labour markets. Anyway, it is still a rough estimation, and the model still is perfectible. What Rosen calls random events or luck, might be the effect of networking or other social skills that were not considered, more specifically the effect of social capital.

### **3.2 Earnings functions**

As discussed above, human capital model assumes that artists are making rational choices when it is about investing in their schooling, gaining experience and occupations. Nevertheless, Towse (2006) points out a few problematic assumptions when it is about collecting and analyzing data about artists' labour market. The most problematic aspects seems to be first the definition of the artists' population (i.e. who are the artists and whom do we include in analysis?), and second, the unavailability of data concerning artists' earnings. Census-data for example, even if they are valuable because they allow comparison with other professions, sometimes they cannot be used due to the fact that there is not enough content about the artists' occupational level. Moreover, there is the bias of multiple job-holdings that interferes and creates validity problems.

#### **3.2.1 Information on earnings and employment from census data**

In this same respect the validity of the Filler's (1986) findings were also argued, mainly due to the use of aggregate data regarding artists' income. He found that for US artists human capital has a weak effect on earnings and later on, Filler (1990) shows that longer schooling actually has a negative effect for performing artists. Due to the validity issue raised by these census data, researchers started to orient themselves to produce cross-section data, which ultimately seems to be more appropriate for the interests of cultural economists.

Surveying approximately three thousand US artists, Wassal & Alper (1985) were able to separate the arts from the non-arts income, and they found out that actually education is not positively correlated with income from work in the arts field. Moreover, it appears that education positively correlated with income from non-arts work, findings that seem to have been replicated in ulterior studies.

#### **3.2.2 Information on earnings and employment from purpose built surveys**

An important step in artist' labour market research was the series of surveys conducted by Withers and Throsby in Australia. Withers (1985) made the distinction between formal education and other qualifications (such as technical and trade certifications) and used as input for his earnings function the hourly wage rate and reported hours of work (to measure earnings). However, the assumptions that employment is continuous from the moment one enters the labour market until his or her retirement, overstated the work experience for females, and it is

considered that this is the case for all the category of artists, since there are a lot of them working irregularly and having frequent unemployment intervals during their job seeking. More accurately, it seems that artists are earning forty percent less when compared to regular workers, this difference being considered as subsidy of artists to the arts or as Bruno Frey would call this compensating differential, psychic income. Comparing with Filler's (1987) findings, there is no high penalty for choosing to work in the arts in the case of US, and the artists who fail can switch professions without significant earnings penalties. This finding is considered by Towse (2006: 874) "a striking testimony to the power of general training". Finally, since Withers (1985) found that human capital has a weak effect on earnings he concluded that other factors as innate characteristics (e.g. talent and motivation) and luck must play the complementary role.

With reference to earnings, Throsby (1994) made the distinction between hours of work in art and non-arts activities. This insight was a way of overcoming census bias and it was a division which was usually done in qualitative work. The census bias consisted mainly in the fact that was defining artists' population conforming to their occupation in the census week, and had attributed earnings from all sources to their art work. This was also the main criticism addressed to Filler's (1986) study mentioned above. Constructing earnings functions for both-, arts and non-arts work made it possible for Throsby to separate between private rate of return for training, education and experience, and also made possible the comparison between these private rates of return for the same sample. Until that moment, Withers and the others used to make the comparison between different samples. However, Throsby found that human capital explains the differences in income in both sectors, and that human capital model was less performing in the case of arts work than in that for non-arts work, again due to the difference in talent and innate ability. Even so, the earnings functions developed by Withers and Throsby left much of the income differentials unexplained.

### **3.2.3 Measurement problems**

Throsby (1996) went further and made the distinction between earnings from arts, arts-related and non-arts and came with a few hypotheses. First, earnings from arts and arts-related work are influenced by the level of professional training, while earnings from non-arts, by the level of general education. Second, the time spent on-the-job is the explanatory variable for arts and arts-related work, while age as proxy for experience being more relevant for non-arts. Further

distinctions were made between creative artists and performing artists and the following dummy variables were used: gender, level of training and education. Even though all the hypothesis seem to have been confirmed, due to the low R square obtained, it was concluded that also other factors than human capital were also at work. This compelled Throsby (1994) to develop an alternative model for human capital investment, namely the work preference model of artists' behaviour, while Cowen & Tabarrok (2000) developed a utility-based model.

### 3.3 Methodological issues

Even though it was thought that sorting models would be a rival theory for the human capital, Blaug (1976) considers it to be rather complementary. As Towse (2006: 875-876) underlines, "predictions of the theory cannot unambiguously be tested because of the unsolved question of the separate influence of innate ability and the assumption of individual rational behaviour regarding schooling decisions." Further she states that it is more important to find out why schooling explains earnings rather than if it merely explains it. *Nevertheless, the two aspects are interconnected and if schooling is a poor explanatory variable in the case of artist earnings the 'why' question follows in as a necessary logical step.*

Moreover, Blaug (1976) claims that there was empirical progress in human capital theory in the respect of better data sets and more appropriate and more complex models of econometric analysis. However, Towse (2006) states that there are by far less examples of earnings functions in the case of artists' labour market, mostly because of the absence of reliable data sets, the difficulty in operationalizing talent and the skewed distribution of earnings. In the case of artists' labour market this greater variance in earnings is raising the question whether the artists are risk-takers or risk-averse, however, greater concerning more the validity of assumption rather than the accuracy of predictions. Artists' labour market seems to be dominated by self-employment, a great frequency of job search accompanied by a greater informational problem. Furthermore, the artistic output is mostly heterogeneous, resulting in an uncertain demand for it. It is this uncertainty that leads to the contracting problems in cultural industries, as Caves (2000) claims.

Towse (2001) infers that the excess of supply in artists' labour market is causing this prevalence of unemployment amongst them. But this raises again the above mentioned problem of validity of assumption. The majority of artists are rather self-employed and work on a project basis, so the human capital model with its assumptions is less likely to be applied to this



particular labour market. The social and cultural capital could perform better if manages to operationalize and measure the right variables involved in prediction, this including innate abilities and creativity.

### 3.4 Conclusions

Economists assume that at the age of sixteen one enters the labour market and that decision of continuing training after that age will involve an opportunity cost. However, someone might opt for on-the-job training and learning by doing as a substitute for schooling, and might accept lower earnings in exchange for gaining experience. The Mincer earnings function, based on a series of simplifying assumptions due to the impossibility of getting accurate data fails to estimate the ability bias, while Rosen's study on identical and non-identical twins even though it finds earnings differentials to be caused in equal proportions by human capital, personal effects and luck, it is too simplifying to be satisfactory. The main difficulty in estimating earnings functions seems to be caused by the definition of artists' population, the absence of adequate information on earnings and the census bias regarding occupational level and multiple job-holding. A consensus seems to be reached by the empirical research, namely that of the weak effect of human capital on earnings differentials and occupational status, compelling some authors to develop alternative explanatory models (e.g. the work preference model, the utility-based model). Moreover, in the studies of artists' labour market the problem seems to rely less on the accuracy of prediction and more on the validity of assumption. *Consequently, this research project will test if the variation in earnings and employment status is caused (and in what proportion?) by schooling operationalized as social capital, this being seen as a first step in developing a social capital model.*<sup>3</sup>

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<sup>3</sup> In the next chapter, insights are given on the empirical research design and the variables included.

## Chapter 4: Research design

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In this chapter details on the research design will be given. Section §4.1 offers a few insights of the research technique (survey) used and of the problems encountered, section §4.2 describes the surveyed population, section §4.3 refers to the related ethical issues, while section §4.4 approaches the problems of validity and reliability. Furthermore, section §4.5 regards the operationalization of the concepts, whilst specifying the dependent and independent variables and the related research sub-questions. Finally, in section §4.6 a short description of the statistical methods of data analysis is presented.

### 4.1 Research technique

For data collection, a web survey on Conductors Guild members was conducted between the 1<sup>st</sup> and the 20<sup>th</sup> July 2008. In May 2008 a pre-test of the constructed questionnaire was carried out via email. Since the responses rate was relatively low for the email pre-test (approximately 10%), later on, for the core survey, an online questionnaire was built via [www.surveymonkey.com](http://www.surveymonkey.com). In the previous months the collaboration with the Conductors Guild board was also negotiated, with the purpose of facilitating access to its members and to increase the response rate. In exchange, access to the results of the survey was offered together with the MA thesis, upon its completion. An email that announced the survey was sent via the Conductors Guild to its intra-net members from the Guild List, comprising of approximately 300 members. Since this list does not cover all of the Conductors Guild members, the email with the survey link was sent to all the other members individually, shortly after. A reminder was sent one week later.

### 4.2 Population

The Conductors Guild is a professional organization that offers to those who are interested in conducting a one year membership against a fee. Because one of the things they offer is a complete list of their members and contact details, a membership application was done. For the year of 2008 there was a list of approximately 1800 subjects. Members are mostly professionals who activate as conductors or have a direct interest in conducting. The majority are US residents and less than ten percent are from outside of the US. The survey link was sent to all of them. Since the population of Conductors Guild is relatively small it was decided not to use a sampling

method. From the total population approximately 330 members filled in the questionnaire from which 300 have done it completely. Only these 300 cases were kept in the final SPSS database and used for data analysis. This translates into a response rate of almost 20%.

### **4.3 Ethical Issues**

This particular survey did not raise special ethical concerns. Nevertheless, two aspects were considered and have to be mentioned. First of all, anonymity for the respondents was ensured (See Appendix I). Since it was an online survey this was not a difficult task. Second, as mentioned above, the Conductors Guild board and members were co-interested to participate in the research and in exchange for their collaboration access to the survey results and to the thesis after completion were offered. This it will be done later on, after defending the MA thesis, by constructing a website especially for this purpose.

### **4.4 Validity and reliability**

Conforming to Seale (2006:72-75), validity refers to the accuracy and truth-value of the obtained results. Concerning *measurement validity*, a special attention was given to the construction of the questionnaire and the building of items in a way that it measures exactly what was intended (face validity). In this respect, in the construction of the questionnaire were considered both-, the suggestions of the supervisors and those of insiders (respondents). Moreover, in the chapters 5-7, the results were interpreted in line with theoretical expectations and how well it conforms to them (construct validity). The *internal validity* was also considered, especially regarding the time order (i.e. schooling - as independent variable precedes earnings and employment - as dependent variables), the association of the independent variable with dependent one (when the measure of schooling changes, the measure of earnings and employment changes too) and the spurious causation (if the association between the variables mentioned are not caused by a third factor). In the next chapters of data analysis a special section was dedicated to spurious causation for each research sub-question. Regarding *external validity*, since the population was not large enough to allow a sampling procedure, and since all 1800 were reachable via email, the survey link was sent to all, therefore the research more resembles a census procedure.

*Reliability* on the other hand, refers to the consistency with which the results are delivered. In this sense, although the pre-test was done via email, during the actual survey the data was gathered online via [surveymonkey.com](https://www.surveymonkey.com). The questionnaire was improved after pre-test, but the

pre-test responses were not included in the final database, therefore it is warranted to conclude that the results are reliable. Concerning the issue of *replicability*, this was considered in two ways: first, the instrument was built in a way that it replicates somehow previously similar empirical research, and second, it allows further replication of the obtained data.

## 4.5 Operationalization

### 4.5.1 Research (sub) questions

The research question, as presented in Chapter I, addresses the issue of *how much from the variance in earnings and employment can be predicted by schooling?* This was divided into four sub-questions, each of them corresponding to one out of two dimensions of the two dependent variables (earnings from music activities, earnings from non-music activities, current employment status in a musical job, and current employment status in a non-musical job). Therefore, the four research sub-questions are:

- a. *What are the effects of schooling on income from music activities?*
- b. *What are the effects of schooling on income from non-music activities?*
- c. *What are the effects of schooling on current employment status in a musical job?*
- d. *What are the effects of schooling on current employment status in a non-musical job?*

The first two questions will be approached in Chapter 5, while the next two in Chapter 6, both chapters dealing with data analysis, while in Chapter 7 the results of the four sub-questions will be integrated and interpreted through the theoretical perspective in a way that the answer to the main research question will be provided. In the next section of this chapter the concepts used in the research question and in the sub-questions are operationalized.

### 4.5.2 Variables

The following variables were operationalized and included in the research design. The data was gathered using a questionnaire (see Appendix I). In an ulterior phase, after introducing the data base in SPSS, the items of some variables (I-V) were re-operationalized with the purpose of facilitating data analysis in a way that allows comparability with the previous empirical studies from cultural economics. This re-operationalization was done mainly in the sense of regrouping the items of the above mentioned variables after music/ non-music dichotomy (arts/non-arts

respectively), which seems to have been favoured in the research tradition of artists' labour market studies, and consequently bringing replicable results.

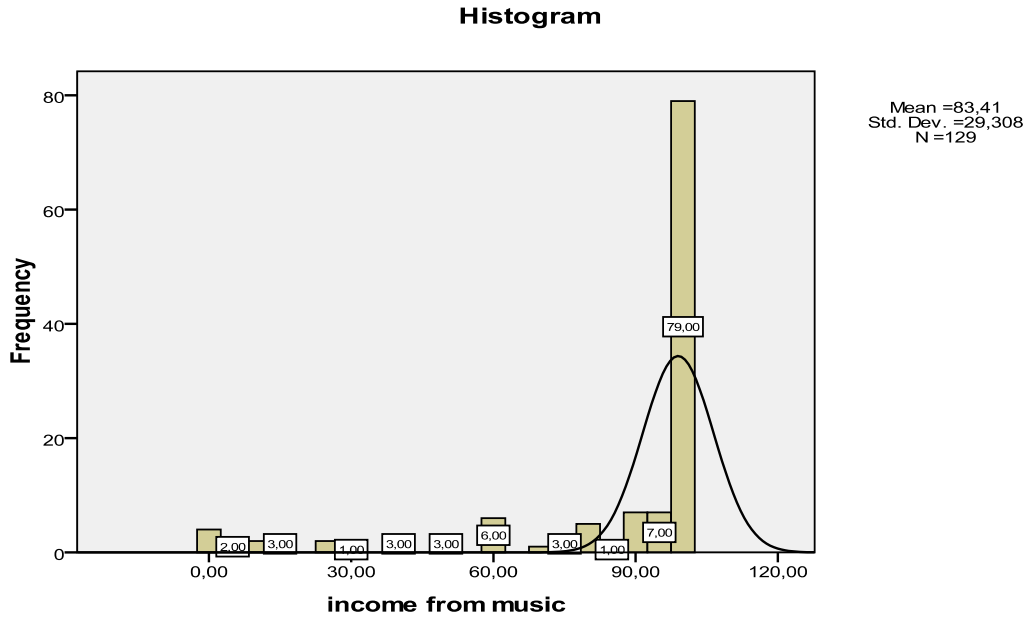
#### 4.5.2.1 Dependent variables

*Income* was seen as self declared percentage from specific sources: conducting, royalties/copyright, music related activity, non-music related activity (see item 1 in the questionnaire, Appendix I). While the data was gathered conforming to these four items, later in the SPSS database, the variable income was re-operationalized in two dimensions: *income from music activities* (including the first three items: income from conducting, from royalties and music related activities) and *income from non-music activities* (containing the fourth item). The variable's type is *scale* and the scale values are between 1 and 100. The respondents were asked that the reported income percentage from all the sources to sum up 100. Figures 4.1 and 4.2 below present the histograms and some descriptive statistics as the frequencies of cases, mean, standard deviation and number of cases included.

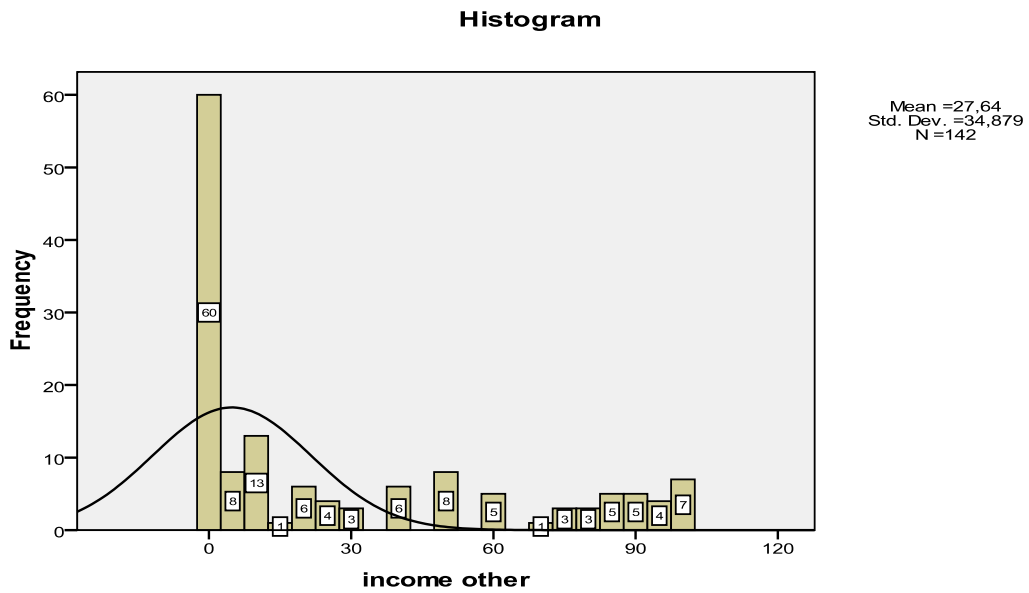
*Employment status* was operationalized with reference to the current job held in the area of conducting activity, music related activity or non-music related activity (see item 2 in the questionnaire, Appendix II). After data collection, the variable employment status was also re-operationalized conforming to music/non-music division, obtaining two new variables: *music position* and *non-music position* (other position). While the type of variable music position became a scale, the other variable non-music position remained a dummy variable. The scale for the variable music position took the values 0 for those who did not have a position in conducting or music related activities, 0.5 for those who had a conducting position or a music related one and 1 for those who had both-, a conducting position and another music related one. Figures 4.3 and 4.4 below present the correspondent histograms and descriptive statistics for the two dimensions of variable employment status.

#### 4.5.2.2 Independent variables

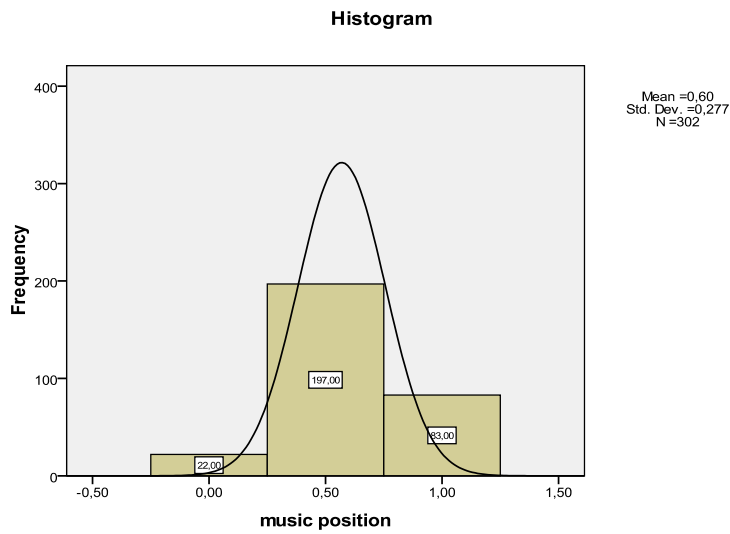
*Formal education* in this research design was operationalized as having two dimensions, conforming to the definition of social capital (see Chapter 2, section 2.6): level of diploma (degree) and the amount of sources for financing education. The data on *level of diploma* (degree) was gathered for conducting, general music and non-music studies.



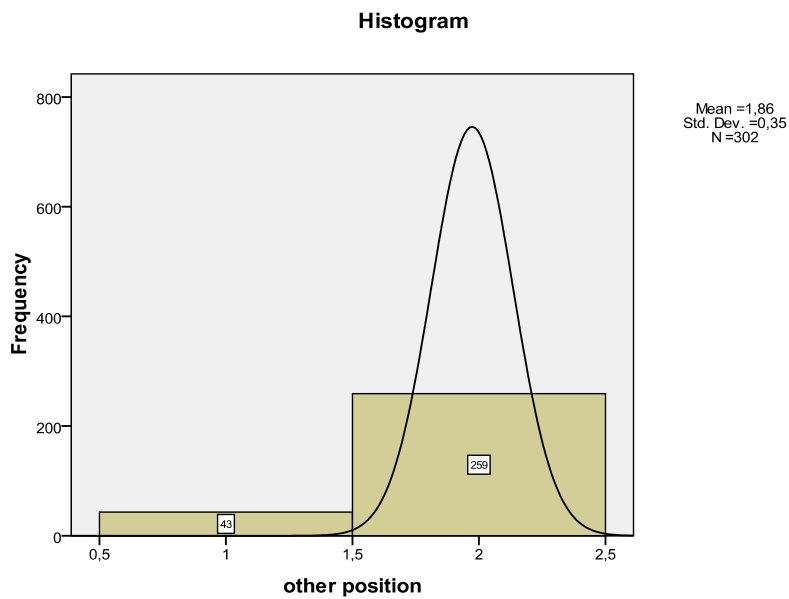
**Figure 4.1** Descriptive statistics for variable income from music activities



**Figure 4.2** Descriptive statistics for variable income from non-music activities



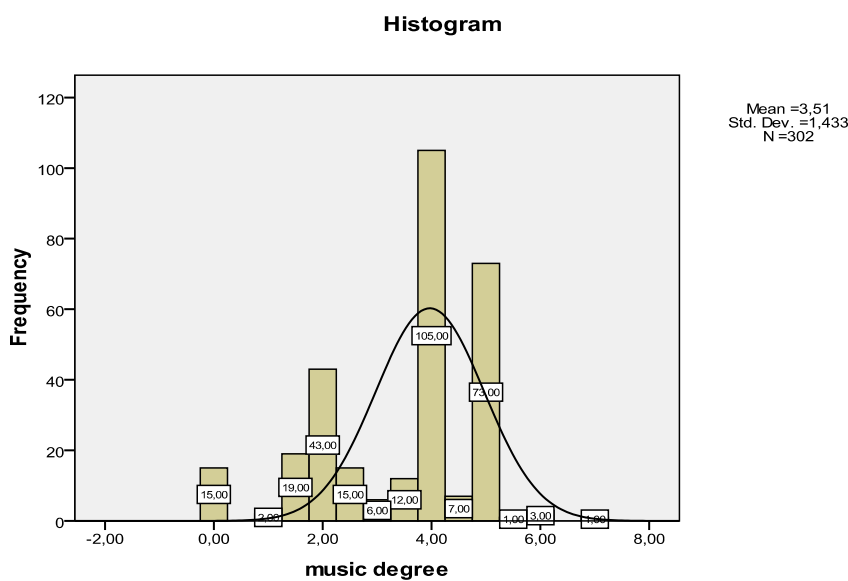
**Figure 4.3 Descriptive statistics for variable current music position**



**Figure 4.4 Descriptive statistics for variable current non-music position**

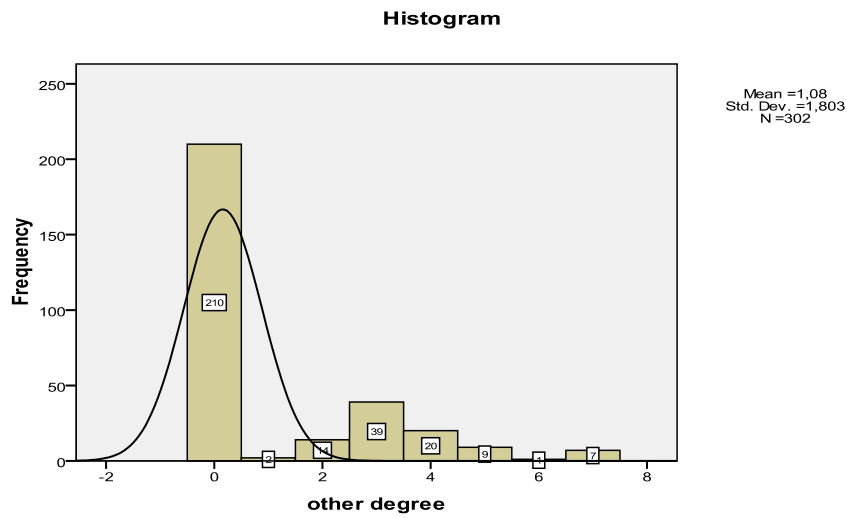
For each of these three items the possible choices were elementary school, high-school, bachelor, master, doctorate and post-doctoral studies (see items 3-5 in questionnaire, Appendix I). After data collection the variable level of diploma was re-operationalized following the music/non-music dichotomy, obtaining two new scale variables: *music degree* (which includes both-, the

specific degree in conducting and other music related ones) and *other degree* (referring to the ones in other fields than music). The type of these two variables is scale and they take values from 1 to 6. Whilst for the variable other degree the scale corresponds to the initial operationalization (1-elementary school, 6-post doctoral), for the new variable music degree a scale was constructed conforming to an index, in a way that it combines the rank of diplomas of specific conducting with general music. The second dimension of the variable formal education, which is *source of financing* for education, was first operationalized as dummy, in a way that it could indicate the source from which the respondent got his financing during training (family, government, non-governmental organization, music related job, non-music related job, other), and later on re-operationalized as a single scale variable that indicates the amount of sources for financing. The scale for this variable was from 1, which means a single source for financing education, to 6, which means as much sources of financing education. Figures 4.5, 4.6 and 4.7 below offer information on descriptive statistics of the three operational dimensions of the variable *formal education* (schooling).

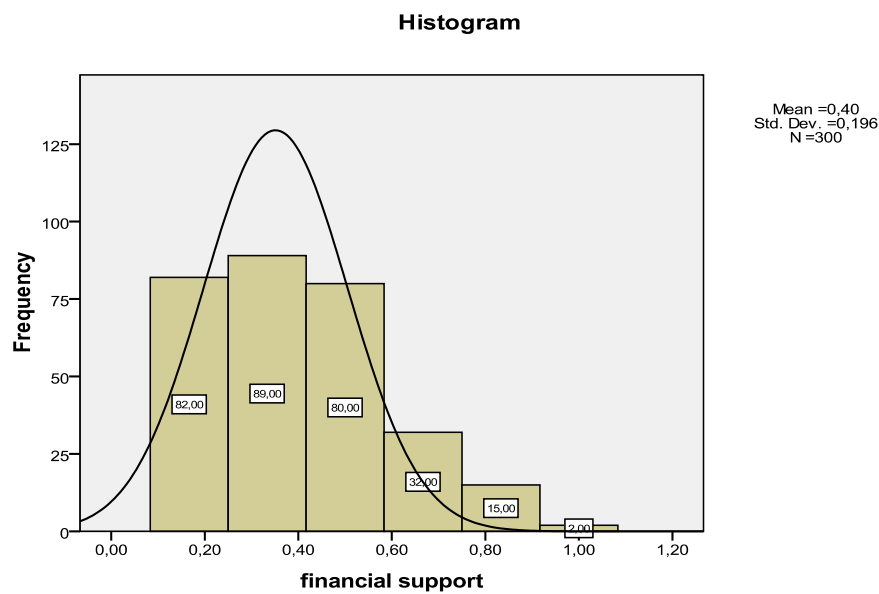


**Figure 4.5 Descriptive statistics for variable music degree**





**Figure 4.6 Descriptive statistics for variable other degree**



**Figure 4.7 Descriptive statistics for variable financial support**

Other dummy independent variables were included in the research design as follows: *agent*, *gender*, *nationality* and *residence*. Conforming to Caves (2000) *agents* are of a particular importance in classical music industry due to the information problems. In a labour market where ‘nobody knows’, *agents* seem to be the best informed. *Gender* represents also an important issue

in conducting profession due to the male dominant tradition. The distinction between *nationality* and *residence*, with the last one kept in the research design, was done because it might represent two different categories of people: the members of Conductors Guild might be US residents, but might have a different nationality, while some might not be US residents or citizens. The scale variable *age* was also included as a proxy for experience (split into 14 intervals as seen in the questionnaire from the Appendix I).

#### **4.6 Statistical method(s) of data analysis**

##### **4.6.1 Multivariate regression**

Conforming to Field (2009: 143), the basic principle of regression analysis is to predict one variable from another, “a way of predicting some kind of outcome from one or more predictor variables”. The regression analysis could be simple, when we predict an outcome from a single predictor, or multiple, when we predict the outcome from a several predictors. The method of data analysis appropriate for this research project is therefore multiple regressions, and even though the purpose of this paper is not to go into details of the mathematical apparatus behind it, in the next two chapters, a few basic statistical procedures relevant for testing the validity of the models will be accounted. All the variables included in this research design are either dummy or scale, as the regression method requires.

##### **4.6.2 Path analysis**

As Seale (2006: 350) states, path analysis represents a statistical methods that allows the summing up of the effects of independent variables on the dependent one. This can be done by using the results and coefficients of multiple regression method analyzed beforehand. The sum up of the effects of independent variables over the dependent one can be visualized in a path diagram where the Betas are presented, and the direct, indirect and total influence of the independent variables can be drawn. In the next two chapters an attempt to draw four path diagrams has been done in order to visualize and to better understand the obtained results. This will also help see how the results answer the main research question and the related sub-questions.

## Chapter 5: Data analysis.

### The effects of schooling on earnings

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In this chapter the data analysis of the first two research sub-questions has been performed. These are phrased according to the two dimensions of the first dependent variable (*earnings*), namely *earnings from music activities* and *earnings from other activities*. The purpose is to measure the effect of *schooling* (as independent variable) and its predictive power over *earnings*. However, in the analysis were also introduced other independent variables as included in the research design. It was experimented first with the *stepwise method* for the purpose of identifying the independent variables that have significant effects. After this identification some regression models were built using *multiple hierarchical regression method*. As Howitt & Cramer (1997) state, in the case of the stepwise method the independent variables are introduced in the model conforming to the statistical criteria and, and the statistical procedure decides which predictors are the best, while the hierarchical method enables the researcher to decide in what order a list of predictors were used. It is this combination of the two regression methods that enabled the construction of the two valid regression models presented bellow, with the correspondent regression equations, spurious effects and path diagrams.

#### 5.1 The effects of schooling on income from music activities

##### 5.1.1 Regression model

From all the predictors included in the research design the ones who were significant concerning the effects on *earnings from music activities* were: *music degree*, *other degree*, *financial support* and *age*. For the first predictor (see Table 5.1 bellow), *music degree*, the value of **R Square** is **.059** which means that the *level of diploma/degree* explains **5.9 percent** from the variation in *earnings from music activities*, while **Sig. F Change of .007** shows that the model is significant at a **.01 level**. When the second predictor is added, *other degree*, an **R Square** of **.12** shows that the predictors *music degree* and *other degree* are responsible for **12 percent** variation in *earnings from music activities*, with the predictor *other degree* adding up **6.1 percent** variation in the model, while a **Sig. F Change of .004** shows that the model is significant at a **.01 level**. If a third

predictor is added, *financial support* for education, an **R Square of .163** indicates that the model increases its explanatory power until **16.3 percent** from the variation in *earnings from music activities*, with a **Sig. F Change of .014** meaning that the model is significant at a **.01 level**, the predictor *financial support* adding **4.3 percent** explanatory power. It can be concluded therefore, that *schooling* (which includes the three predictors mentioned above) explains **16.3 percent** from the variation in *earnings from music activities*.

**Table 5.1 Model summary I. Effects of schooling on earnings from music activities**

Model	R	R Square	Adjusted R Square	Sig. F Change	Durbin-Watson
1	.242 <sup>a</sup>	.059	.051	.007	
2	.346 <sup>b</sup>	.120	.105	.004	
3	.404 <sup>c</sup>	.163	.142	.014	
4	.436 <sup>d</sup>	.191	.163	.048	2.188

a. Predictors: (Constant), music degree

b. Predictors: (Constant), music degree, other degree

c. Predictors: (Constant), music degree, other degree, financial support

d. Predictors: (Constant), music degree, other degree, financial support , age

e. Dependent Variable: income from music

However, a fourth predictor from the ones included in the research design was found having a significant explanatory power, and that is *age*. An **R Square of .191** suggests that age adds up **2.8 percent** explanatory power to the model, until a **19.1 percentage** variation in the dependent variable. The **Sig. F Change of .048** indicates that the model is significant at a **.05 level**, and finally, a Durbin-Watson score between 1 and 3 (more exactly 2.188) shows that there are no independent errors in the model.

### 5.1.2 Regression equation

Table 5.2 bellow summarizes the main coefficients necessary to build the regression equation, while a more detailed coefficients output can be found in Table 1 from Appendix II. The three predictors operationalized as *schooling* (*music degree*, *other degree* and *financial support*) are

significant at a **.01 level**, while the predictor *age* is significant at a **.05 level**. The signs of Betas indicates that *music degree*, *financial support* and *age* are positively correlated with *earnings from music activities*, while the predictor *other degree* is negatively correlated with the dependent variable. Conforming to Field (2009), if the VIF score is between 1 and 9 and close to 1, then there are no collinearity problems. In our case, a medium VIF score of 1.013 indicates that there is no collinearity for the constructed model.

**Table 5.2 Coefficients for model I. Effects of schooling on earnings from music activities**

Blocks	B	Standard error B	Beta
<b>Block 1</b> <i>Music degree</i>	4.261	1.703	.208*
<b>Block 2</b> <i>Other degree</i>	-3.719	1.263	-.244*
<b>Block 3</b> <i>Financial support</i>	33.361	12.166	.228*
<b>Block 4</b> <i>Age</i>	1.695	.849	.166*

\*Model significant at a level **.05**

The obtaining of the B values allows the construction of the regression equation which in turn enables the calculation of how much the dependent variable actually varies, should the size of a predictor be increased by one unit, while keeping the other predictors constant:

$$\begin{aligned}
 \mathbf{IM}_i &= b_0 + b_1\mathbf{MD}_i + b_2\mathbf{OD}_i + b_3\mathbf{FS}_i + b_4\mathbf{A}_i \\
 &= 48.550 + (4.261\mathbf{MD}_i) + (-3.719\mathbf{OD}_i) + (33.361\mathbf{FS}_i) + (1.695\mathbf{A}_i), \quad (2)
 \end{aligned}$$

In the equation (2) above, IM represents the dependent variable *income from music*, MD-*music degree*, OD-*other degree*, FS-*financial support* and A-*age*, while  $b_0$ ,  $b_1$ ,  $b_2$ ,  $b_3$  and  $b_4$  are the b-values as reported in the table above. This means that if MD (*music degree*) is increased with one unit it will produce an increase in IM-*income from music* of 4.261; if OD-*other degree* is increased with one unit then it produces a decrease in IM with 3.719; if FS-*financial support* is increased with one unit then it produces an increase in IM with 33.361; and finally, if A-*age* is increased with one unit then IM increases also with 1.695 percent.

### 5.1.3 Spurious causation

All the predictors included in the research design were checked to see if they produce spurious causation through the same regression analysis. Conforming to Seale (2006), spurious causation might appear when the hypothesized effect of the independent variable on the dependent one might be mediated by a third predictor. In this sense, only *financial support* (the amount of sources for financing education) was found to be positively correlated with *music degree* (level of diploma). An **R Square of .013** indicates that the effects are rather small, financial support being responsible for only **1.3 percent** variation in *music degree*, with a **Sig. F Change of .052** meaning that the regression is significant at a **.05 level** (see Tables 5 and 6 from Appendix II).

## 5.2 Effects of schooling on income from non-music activities

### 5.2.1 Regression model

Concerning the second research question, from all the predictors included in the research design only *other degree*, *financial support* and *residence* had a significant effect on the dependent variable *income from non-music activities*. The predictor *other degree* has a significant effect on the dependent variable with an **R Square of .070**, which translates into it being responsible for **7 percent** variation in dependent variable, while a **Sig. F Change of .002** indicates that the result is significant at a **.01 level**. The predictor *financial support* adds up another **5.1 percent** to the explanatory power of the model, the **R Square of .121** indicating that together, *other degree* and *financial support* operationalized as *schooling* are responsible with **12.1 percent** variation in *income from other activities* than music. The **Sig. F Change of .006** indicates that the model is significant at a **.01 level**.

**Table 5.3 Model summary II. The effects of schooling on earnings from other activities**

Model	R	R Square	Adjusted R Square	Sig. F Change	Durbin-Watson
1	.264 <sup>a</sup>	.070	.063	.002	
2	.348 <sup>b</sup>	.121	.108	.006	
3	.385 <sup>c</sup>	.148	.129	.043	2.069

a. Predictors: (Constant), other degree

b. Predictors: (Constant), other degree, financial support

c. Predictors: (Constant), other degree, financial support, residence

d. Dependent Variable: income other

From the other independent variables included in the research design only residence proved to be a significant predictor. *Residence* adds up another **2.7 percent** to the explanatory power of the model, an **R Square of .148** indicating that the three predictors are responsible for **14.8 percent** variation in the *income from other activities* than music. A **Sig. F Change of .043** indicates that the regression model is significant at a **.05 level**, while a Durbin-Watson score of 2.069 (between 1 and 3) shows that there were no independent errors included in the model.

### 5.2.2 Regression equation

The coefficients of this regression model are presented in Table 5.4 together with the B values necessary to build the regression equation, while a more detailed output could be seen in Table 2 from Appendix II. In this case from the three predictors operationalized as *schooling* only two (*other degree* and *financial support*) were found as significant predictors for the dependent variable *income from other activities*, at a significance **level of .01**, while for the other independent variables from the research design residence was significant at a **.05 level**. The signs of the Betas show that while *other degree* and *residence* are positively correlated with *earnings from another activity* than music, the predictor *financial support* is negatively correlated with the dependent variable. A medium score of 1.014 for VIF (between 1 and 9 and close to 1) indicates that there are no collinearity problems.

**Table 5.4 Coefficients for model II. Effects of schooling on earnings from other activities**

Blocks	B	Standard error B	Beta
<b>Block 1</b> <i>Other degree</i>	4.281	1.362	.255*
<b>Block 2</b> <i>Financial support</i>	-42.490	14.445	-.238*
<b>Block 3</b> <i>Residence</i>	16.743	8.195	.165*

\*Model significant at a **level .05**

Furthermore, the available b values enable the construction of the regression equation which can predict how much the *income from other activities* than music changes, if we change the size of a predictor with one unit, while holding the others constant:

$$\begin{aligned} \mathbf{IO}_i &= b_0 + b_1\mathbf{OD}_i + b_2\mathbf{FS}_i + b_3\mathbf{R}_i \\ &= 25.509 + (4.281\mathbf{OD}_i) + (-42.490\mathbf{FS}_i) + (16.743\mathbf{R}_i), \end{aligned} \quad (3)$$

In the equation (3) above, IO represents the dependent variable *income from other activities*, OD-*other degree*, FS-*financial support* and R-*residence*, while  $b_0$  is the constant (see Table 2, Appendix II) and  $b_1$ ,  $b_2$  and  $b_3$ , the  $b$ -values for each predictor (see Table 5.4). The above regression equation means that if OD (*other degree*) is increased with one unit it will cause an increase in IO (*income from other activities*) of 4.281; an increase with one unit in FS (*financial support* for education) will produce a decrease in IO of -42.490; and finally, having the *residence* in US increases the IO with 16.743 compared to those who reside outside US. Concerning this model, no spurious effects were found between the predictors.

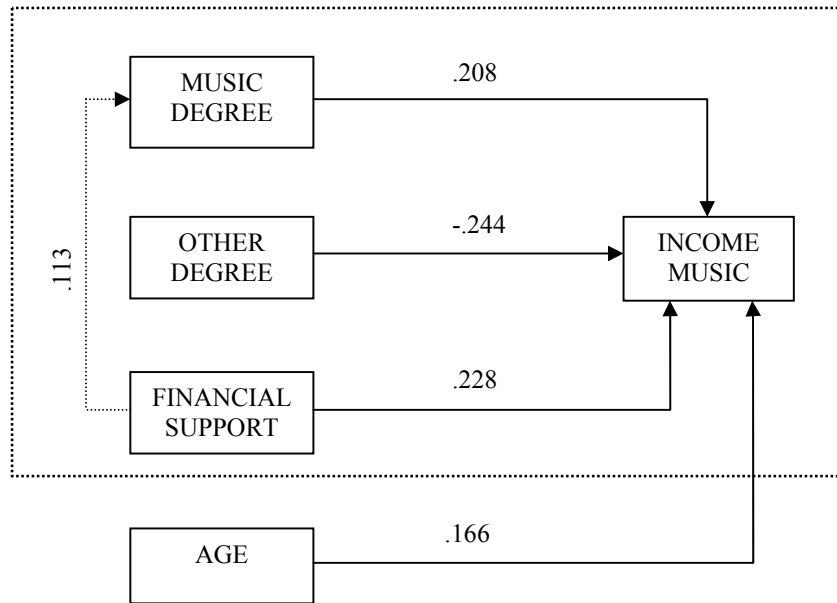
### 5.3 Path models

Having constructed the two valid models that attempt to explain the *effects of schooling on earnings from music and non-music activities*, we can now draw a path diagram for each of them. This enables a better understanding and visualization of the findings reported above. Regarding the Figure 5.1 and 5.2 below, the following specifications are needed. First, the causal effects of the predictors are drawn with straight line arrows, while the spurious causation which was found between predictors is drawn with discontinuous line arrows. Second, the discontinuous square that encloses the first three predictors in the Figure 5.1 and the first two predictors in the Figure 5.2 are meant to underline the predictors operationalized as schooling, therefore making easier the answer to the research question and sub-questions. Finally, the numbers attached to the arrows and their related sign represent the Beta coefficients.

As seen in the Figure 5.1, all the three predictors operationalized as *schooling* have significant effects on *earnings from music activities*, explaining **16.3 percent** from its variation. From all the other predictors included in the research design only *age* added up in the explanatory power of the model up to a variation of **19.1 percent** in the dependent variable. The model including only the three *schooling* predictors is significant at a **.01 level**, while a model including all four predictors is significant at a **.05 level**. *Music degree* is responsible for **5.9 percent** variation in the dependent variable, while *other degree* adds another **6.1 percent**, *financial support* **6.3** and *age* **2.8 percent**. Moreover, some spurious causation has been found between *financial support* and



*music degree*, indicating that *financial support* is responsible for **1.3 percent** variation in *music degree*, the sign of Beta indicating that there is a positive correlation between the two. As the signs of the other Betas indicate, *music degree*, *financial support* and *age* are positively correlated with *earnings from music*, while *other degree* is negatively correlated. The meaning of these signs and the theoretical implications will be discussed in the last chapter of the paper.

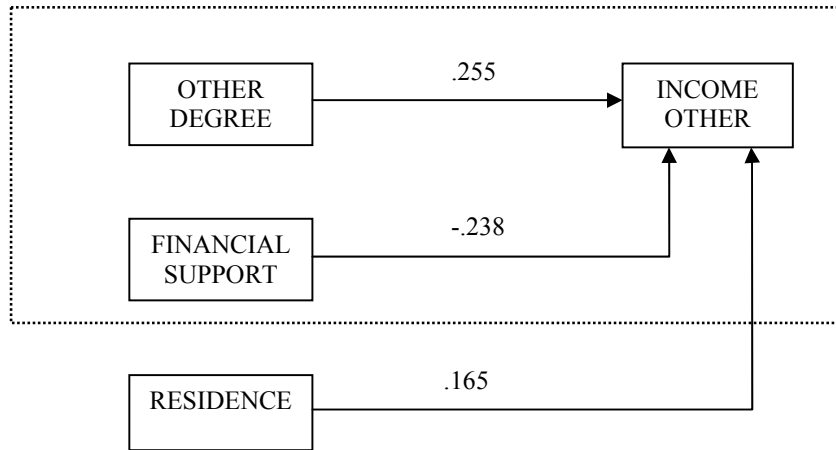


**Figure 5.1: Path diagram I. Effects of schooling on earnings from music activities<sup>4</sup>**

In Figure 5.2 below it can be observed that from all the three predictors operationalized as *schooling*, only *other degree* and *financial support* have a significant effect on *earnings from other activities* than music, both being responsible for **12.1** of the variation in the dependent variable. From all the other predictors included in the research design only *residence* has proved to have a significant effect adding up to **14.8 percent** explanatory power for variation in the dependent variable. A model that will include only the two *schooling* predictors is significant at a **.01 level**, while a model that will include also *residence* is significant at a **.05 level**. *Other degree* alone is responsible for **7 percent** of the variation in the dependent variable, *financial support* for

<sup>4</sup> In Figures 5.1 and 5.2, the straight arrows indicate the direct causal effects found between predictors and dependent variable as operationalized in the research design, while the arrows drawn with discontinuous lines show the spurious causation between the predictors. Furthermore, the square drawn with a discontinuous line is meant to underline the relevant findings for the research question.

**5.1 percent**, while *residence* for **2.7 percent**. The signs of the Betas are positive for *other degree* and *residence*, while for *financial support* it is negative.<sup>5</sup>



**Figure 5.2: Path diagram II. Effects of schooling on earnings from other activities than music**

<sup>5</sup> Their significance and theoretical implications are discussed in the final chapter.

## Chapter 6: Data analysis.

### The effects of schooling on employment

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This second chapter of data analysis deals with the last two sub-questions presented in Chapter 4 phrased conforming to the two dimensions of the second dependent variable. The dependent variable, *employment status*, was divided into *employment in a musical position* and *employment in a non musical position*, with the purpose of measuring the predictive power of *schooling* and other independent variables included in the research design. As in the previous chapter, two regression models were built and the weight of every single predictor was presented. Furthermore, some regression equations were developed, which enables the calculation of the predictors power, followed by the presentation of the spurious causation found between variables. Finally, two path diagrams were presented with the purpose of a better visualization of the findings and some conclusions were drawn.

#### 6.1 The effects of schooling on employment in a musical position

##### 6.1.1 Regression model

The predictors that proved to have significant effects on the dependent variable (*employment status in a music-related position*) are *other degree*, *financial support*, *age* and *residence* (see Table 6.1 bellow). For the first predictor, *other degree*, an **R Square of .06** indicates that having a *degree in a field other than music*, explains **6 percent** variation in the *employment status in a music related position*. When the second predictor (*financial support*) is included in the model, an **R Square of .123** shows that this variable adds another **6.3 percent** explanatory power in the variation of the dependent variable, Therefore, the combined effect of the two predictors from the independent variable, *schooling*, is **12.3 percent**. The model that includes only these two variables is significant at a **.01 level**, as the Sig. F Change indicates.

From the other independent variables included in the research design, *age* and *residence* were also found as having significant effects on the dependent variable. In this sense, the predictor *age* adds up another **1.6 percent** explanatory power to the model, an **R Square of .139** indicating that this model is responsible for **13.9** of the variation in the dependent variable. Finally, *residence* adds another **2 percent** explanatory power to this regression model, an **R Square of .159**

indicating that the model explains **15.9 percent** of the variation in the dependent variable. A **Sig. F Change of .01** indicates that the model is significant at that level, while a Durbin-Watson score of 1.880 (between 1 and 3) indicates that the model does not contain independent errors.

**Table 6.1 Model summary III. Effects of schooling on employment in a music-related position**

Model	R	R Square	Adjusted R Square	Sig. F Change	Durbin-Watson
1	.245 <sup>a</sup>	.060	.057	.000	
2	.351 <sup>b</sup>	.123	.117	.000	
3	.373 <sup>c</sup>	.139	.130	.019	
4	.398 <sup>d</sup>	.159	.147	.010	1.880

a. Predictors: (Constant), other degree

b. Predictors: (Constant), other degree, financial support

c. Predictors: (Constant), other degree, financial support , age

d. Predictors: (Constant), other degree, financial support , age, residence

e. Dependent Variable: music position

### 6.1.2 Regression equation

Table 6.2 bellow presents the main coefficients for this regression model. A more detailed output of the coefficients can be seen in Table 3, Appendix II. Two out of three predictors from the variable *schooling* (*other degree* and *financial support*) were found to have significant effects at a **.01 level** together with other two predictors included in the research design (*age* and *residence*). The signs of Betas indicate that holding a *degree in another field than music* is negatively correlated with the *employment status in a music related position*, while *financial support* is positively correlated. Moreover, *age* is also positively correlated, while *residence* is negatively correlated with the dependent variable. A medium VIF score of 1.028 (between 1 and 9 and close to 1) indicates that there are no collinearity problems for this model.

**Table 6.2 Coefficients for model III. Effects of schooling on employment in a music-related position**

Blocks	B	Standard error B	Beta
<b>Block 1</b> <i>Other degree</i>	-.037	.008	-.240*
<b>Block 2</b> <i>Financial support</i>	.409	.078	.288*
<b>Block 3</b> <i>Age</i>	.014	.006	.142*
<b>Block 4</b> <i>Residence</i>	-.123	.047	-.141*

\*Significant at a .01 level

The reported B values allow us to construct the regression equation, which in turn enables the calculation of the variance in the dependent variable when the size of a predictor increases with one unit, while all the others are kept constant:

$$\begin{aligned} \mathbf{MP}_i &= b_0 + b_1\mathbf{OD}_i + b_2\mathbf{FS}_i + b_3\mathbf{A}_i + b_4\mathbf{R}_i \\ &= .498 + (-.037\mathbf{OD}_i) + (.409\mathbf{FS}_i) + (.014\mathbf{A}_i) + (-.123\mathbf{R}_i), \quad (4) \end{aligned}$$

In the equation (4) above, MP represents the dependent variable *music position*, OD-*other degree*, FS-*financial support*, A-*age*, R-*residence* while  $b_0$  is the constant  $b$  value of the model and  $b_1$ ,  $b_2$ ,  $b_3$  and  $b_4$  represents the  $b$ -values for all the four predictors. The above equation means that if we increase the value of OD with one unit while all the others are held constant, a variation of **-.037 percent** takes place in the dependent variable MP. If the size of FS is increased with one unit a variation of **.409 percent** takes place in MP, while the increase of A with one unit produces a variation of **.014 percent** in the dependent variable. Finally, having the *residence* in US produces a variation of **-.123 percent** in MP, when compared with non-US residents.

### 6.1.3 Spurious causation

Concerning spurious causation (see tables 7 and 8 in Appendix II) only *age* and *residence* were found as having significant effects over *financial support*. While *age* is negatively correlated with *financial support* (the amount of sources for financing education), *residence* is positively correlated with *financial support*. In this respect, *age* is responsible for **2.4 percent** of the

variation in *financial support*, while *residence* adds up another **1.4 percent** up to a total of **3.8**, as the **R Square of .038** for this model suggests.

## 6.2 Effects of schooling on employment in a non-musical position

### 6.2.1 Regression model

A fourth regression model was constructed to explain variation in *employment status in a job different than music*. From all the included predictors, *music degree* and *other degree* were the ones that proved to have significant effects on the dependent variable (see Table 6.3 bellow). Accordingly, an **R Square of .03** indicates that *music degree* is responsible for **3 percent** of the variation in the dependent variable, while *other degree* adds up another **6 percent** of explanatory power up to a value of **9 percent**. The value of Sig. F Change indicates that the model is significant at a **.01 level**, while a Durbin-Watson of 1.825 (between 1 and 3) indicates that there were no independent errors included in the model.

**Table 6.3 Model summary IV. Effects of schooling on employment status in a non-musical position**

Model	R	R Square	Adjusted R Square	Sig. F Change	Durbin-Watson
1	.173 <sup>a</sup>	.030	.027		
2	.300 <sup>b</sup>	.090	.084	.000	1.825

a. Predictors: (Constant), music degree

b. Predictors: (Constant), music degree, other degree

c. Dependent Variable: other position

### 5.2.2 Regression equation

Table 6.4 bellow exhibits the coefficients for the current regression model, while a more detailed view of the related output can be seen in Table 4, Appendix II. Both predictors are significant at a **.01 level**, the sign of Beta indicating that *music degree* is negatively correlated with the dependent variable, while *other degree* is positively correlated. Moreover, the b values enable the construction of the regression equation which can be used in calculating the variance in the dependent variable, should the size of one predictor be increased by one unit, at the same time keeping the others constant:

$$\begin{aligned} \mathbf{OP}_i &= b_0 + b_1\mathbf{MD}_i + b_2\mathbf{OD}_i \\ &= .220 + (-.037\mathbf{MD}_i) + (.048\mathbf{OD}_i), \end{aligned} \quad (5)$$

IN equation (5) above, OP represents the dependent variable *other position*, MD-*music degree*, OD-*other degree*, b<sub>0</sub> the constant and b<sub>1</sub> and b<sub>2</sub> the b-values for the two predictors as reported in the table above. The regression equation indicates that if we increase the size of the predictor MD with one unit the dependent variable OP will decrease with **.037 percent** while the size of the other predictor is kept constant, while if we increase the size of the predictor OD with one unit, the variation in the dependent variable will increase with **.048 percent**. No spurious causation was found for this model.

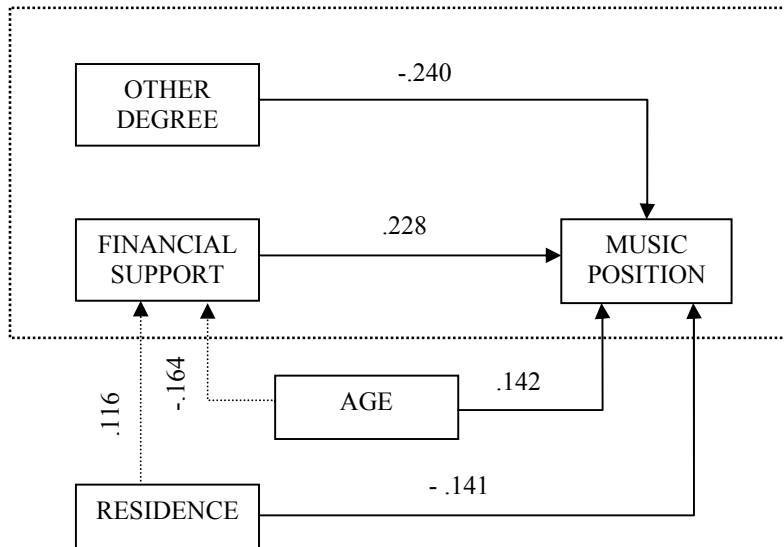
**Table 6.4 Coefficients for model IV. Effects of schooling on employment status in a non-musical position**

Blocks	B	Standard error B	Beta
<b>Block 1</b> <i>Music degree</i>	-.037	.014	-.150*
<b>Block 2</b> <i>Other degree</i>	.048	.011	.247*

\*Significant at a **.01 level**

### 6.3 Path models

As in the previous chapter, after the construction of the two regression models for the second dependent variable (*employment status*), drawing the related path diagrams would allow the better understanding and visualization of the causal effects. In Figures 6.1 and 6.2 below, the straight arrows indicate the direct causal effects found between predictors and dependent variable as operationalized in the research design, while the arrows drawn with discontinuous lines show the spurious causation between the predictors. Furthermore, the square drawn with a discontinuous line in Figure 6.1 is meant to underline the relevant findings for the research question.

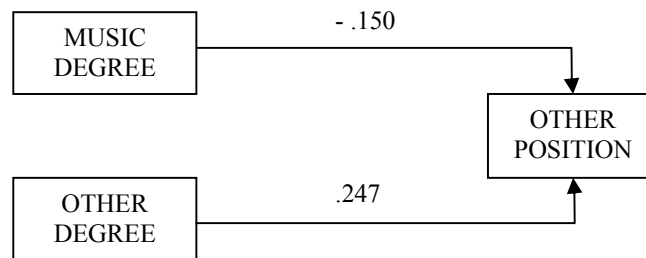


**Figure 6.1 Path diagram III. Effects of schooling on employment in a music position<sup>6</sup>**

In Figure 6.1 above, two out of the three predictors operationalized as *schooling* were found as having significant effects over *employment status in a musical position*. Together, *other degree* and *financial support* are responsible for **12.3** of the variation in the dependent variable, with the first one explaining **6 percent** from the variation and the second one **6.3 percent**. From all the other predictors included in the research design, only *age* and *residence* were found as having significant effects on the dependent variable, with age adding **1.6 percent** explanatory power to the model and residence **2 percent**, up to a total of **15.9 percent**. Both models, the one that include only the two *schooling* predictors and the one that include all four, are significant at a **.01 level**. Moreover, the predictors *age* and *residence* were found as responsible for spurious causation; both responsible for **3.8 percent** of the variation in *financial support*, with *age* explaining **2.4 percent** from the variation and residence **1.4 percent**. In this case of spurious causation, the sign of Beta is negative for *age* and positive for *residence*. The signs of the other Betas indicate that *other degree* and *residence* are negatively correlated with the dependent variable, while *financial support* and *age* are positively correlated. The meaning and theoretical implications of these signs will be discussed in the next chapter.

<sup>6</sup> In Figures 6.1 and 6.2, the straight arrows indicate the direct causal effects found between predictors and dependent variable as operationalized in the research design, while the arrows drawn with discontinuous lines show the spurious causation between the predictors. Furthermore, the square drawn with a discontinuous line in Figure 6.1 is meant to underline the relevant findings for the research question.





**Figure 6.2 Path diagram VI. Effects of schooling on employment in other position than music**

Finally, the path in Figure 6.2 above indicates that from all three predictors operationalized as *schooling*, only *music degree* and *other degree* were found as having significant effects over the dependent variable, *employment status in other position* than music. Both predictors are responsible for **9 percent** of the variation in the dependent variable, with *music degree* explaining **3 percent** of it and *other degree* explaining the remaining **6 percent**. The model including the two predictors is significant at a **.01 level**. The signs of the Betas indicate that *music degree* is negatively correlated with the dependent variable, while *other degree* is positively correlated with it.<sup>7</sup>

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<sup>7</sup> The meaning of these signs and their theoretical implications are discussed in the next chapter.

## Chapter 7: Conclusions

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In this final chapter some conclusions have been drawn regarding the answers that data analysis brought to the research question. Thus, section §7.1 depict the empirical findings and elaborate on the correspondent theoretical implications. Section §7.2 discusses the possible connections of social capital with artists' labour market theory, whilst section §7.3 elaborates on the insights produced by the current research with respect to the limitations occurred and makes suggestions for further investigations of the topic.

### 7.1 Empirical findings and theoretical implications

As suggested by Towse (2006) it seems that *schooling has indeed social capital features*, and as this empirical research shows, *when operationalized accordingly it has significant effects over earnings and employment status* in the case of Conductors Guild Members. The two dimensions of schooling as social capital: level of diploma/degree (as containing some elements of social structure) and amount of sources for financial support of training (facilitating the actions and goals accomplishment for artists), were transformed into three predictors, music degree (measured by a scale that gives account of the level of diploma in music and/or conducting), other degree (measured by a scale that attempts to measure the level of diploma degree held in other fields than music or conducting) and financial support (measured by a scale that refers to the amount of financial sources one may rely upon during his or her training/education). All these three predictors have proved to be responsible for earnings and employment differentials, as shown in the previous chapters of data analysis. The two dependent variables were also operationalized according to the music/non-music division, namely, income from music, other income, music position, other position.

First, in explaining earnings differentials from music activities, all three predictors of schooling as social capital have significant contributions. As the R Square indicates, they explain 16.3 percent of the variation in the dependent variable, income from music. The level of diploma/degree in music is positively correlated with income from music and contributes 5.9 percent in the variation of this dependent variable. *This finding indicates the signalling power of a diploma in such a labour market, and it probably has this positive effect also due to the specificity of the conducting profession, which, being a profession that requires team work,*

*communication and signalling abilities are essential.* The level of diploma/degree in another field than music is negatively correlated with the percentage of income from music activities, and is responsible for 6.1 percent of the variation in this dependent variable. *This finding may suggest that those who hold a degree in another field than music and the higher that degree is the more likely they are to have less income from a music activity, probably due to the alternative sources of earnings becoming available when holding such a degree.* Furthermore, financial support is positively correlated with income from music, this predictor being responsible for 4.3 percent of the variation in the dependent variable. *This will suggest that the size of social network support of one's training has positive effects over his future earnings from music activities, and is probably connected to someone's entrepreneurial abilities of mobilizing economic and social resources.* This interpretation seems to be supported also by the fact that financial support was found responsible for spurious causation, being positively correlated with it and explaining 1.3 percent of the variation in the level of diploma/degree. Finally, from all the other independent variables included in the research design, age (as a proxy for experience) was also found as being a positive predictor, explaining 2.8 percent of the earnings differentials in income from music activities. *This seems to be in accordance with what is known about the conducting profession, namely the fact that it becomes more accessible (and profitable) with the passing of time.* However, even though it is a male dominant profession, gender was not found as having significant effects on earnings from music activities and neither was having an agent or not. Although, Caves (2000) considered agents as having the most information in the area of classical music, it might be that they are active more in the area of the superstars category, which might be underrepresented in our sample.

Second, concerning the effects of schooling on income from other activities than music, two out of the three predictors proved to have significant effects on the dependent variable. The R Square indicates that other degree and financial support are responsible for 12.1 percent for earnings differentials from other activities than music, with other degree explaining 7 percent and financial support 5.1 percent from the variation. *Other degree is positively related to the dependent variable suggesting that those who hold a degree in another field than music (and its level) are more likely to have a non-musical source of earnings, which might shed some light over the artists working preference. It may be after all that some of those who consider a non-musical source of income should need the right formal qualification for it and the related social*

*network to make it possible.* However, financial support is negatively correlated with income from other sources, explaining 5.1 percent from its variation. *Corroborated with the positive effects found of financial support over income from music, this might suggest that as bigger the social network support for financing training and education is, the less likely one is to have (and need) an extra source of income from non music activities.* Finally, from all the other independent variables included in the research design, residence was found as having a positive effect over the dependent variable, adding 2.7 percent of explanatory power up to a total of 14.8 percent for this particular model. *This indicates that US residents are more likely to have an extra source of income than the one from music activities.* However, these results are not representative for all conductors outside the US, but rather for those who are members of The Conductors Guild.

Third, regarding the effects of schooling over the variation in employment status in a music related position, the predictors are other degree and financial support which explain 12.3 percent of the variation in dependent variable. While other degree is negatively correlated, *suggesting that those who hold a degree in another field than music are more likely not to be employed in a music related position, financial support is positively correlated.* This indicates that the larger the size of the social network that supports the conductors training and education, the more likely they are to be employed in a music related position. From all the other independent variables included in the research design, age and residence were found as having significant effects, adding together up to 15.9 percent of explanatory power to the model. *While age (as a proxy for experience) is positively correlated, suggesting that as older you get the more likely you will get a music related position, residence is negatively correlated, indicating that the US residents that are members of The Conductors Guild are more likely not to hold such a position compared to non-US residents.* However, we must remain sceptical about this result, since in the sample 88.6 percent are US residents, therefore, the other category is underrepresented. Moreover, age and residence were found responsible for spurious causation regarding financial support, both explaining 3.8 percent from its variation. *Age was found to be negatively correlated with financial support, suggesting that older the generations the more likely there are to be smaller social networks to finance their education and training, while the new generations have more financing opportunities.* Finally, residence was found to be positively correlated with financial support, indicating that the US members of The Conductors Guild are more likely to have more sources of financing their education when compared to members outside US.

Fourth, schooling was also found as having significant effects on the employment status in a non-musical position, with music degree and other degree explaining 9 percent from the variation in the dependent variable. *While music degree is negatively correlated, indicating that those who have a music degree are more likely not to accept a non-musical position, other degree is positively correlated, showing that those who have a degree in another field than music are more likely to occupy a non-music related position.*

To sum up, it seems that indeed schooling as social capital has significant effects on earnings and employment differentials. First, music degree (and its level) is positively correlated with the percentage of earnings from music activities, at the same time being negatively correlated with the employment status in a non-musical position. Second, having a degree in fields other than in music, is positively correlated with having other sources of income than music, and positively correlated with the employment status in a non-musical position. At the same time the variable other degree is negatively correlated with income from music and music position. Finally, financial support for education (the size of the social network that finances education) is positively correlated with the percentage of income from music and employment in a musical position, at the same time being negatively correlated with the percentage of income from non-musical activities.

These findings indicate that schooling as social capital (or intangible cultural capital) cannot be ignored as predictor for the economic output of conductors, firstly because more social capital would help them better achieve their goals and secondly, due to its connection with the mobilization of resources it raises the equity problem. Therefore, the main merit of this research project seems to rely on the way it shows how social capital can be translated into economic terms and gives insights on how it is possible to invest in this form of capital and clarify the issue of returns to investment.

## **7.2 Social capital and artists' labour market**

It seems that what sets the idea of social capital apart is the complementary perspective it brings to human capital, which was mainly concerned with the influence of innate ability (talent) and skills acquirement. In this sense, social capital may explain why some great talent get lost on the way and it is not cultivated (due to insufficient social capital to support it), while lesser talent

(doubled by greater social capital) could bring a better artistic and economic output when compared to the former.

Moreover, it is warranted to expect some spurious causation in a research design that would differentiate more carefully between human and social capital, such as social capital being a mediator in the effect of human capital over earnings and employment. The discussed asymmetric information between students and employers in the cultural economics may be caused by the differences in social capital ones hold.

Social capital might be a concept that could open some paths in the research of other issues from cultural economics. What cultural economists call helplessly ‘uncertainty of demand’, ‘the role of luck and random events’, ‘nobody knows’ etc., could be some of the notions where social capital maybe able to play a very important role and could perform better as a predictor.

Although age was used by Throsby (1996) as proxy for experience, Towse (2006) seems to consider it as part of social capital. Conforming to the definition, if experience represents the stock of skills one gathered, then it looks more like it is part of his human capital. However, if we consider the fact that the investment in human capital may be mediated by social capital, this separation is not so easy to do. As Figures 5.1 and 6.1 illustrates, age has direct positive effects over ones amount of income from music activities and on his employment status in a music related position. Moreover, as Figure 6.1 shows, age has negative effects on financial support (the amount of sources used by someone to finance his training), indicating that a more complex research design which will include other dimensions of human capital can give insights into the flow of this forms of capital.

Furthermore, residence was found to have direct positive effects over ones earnings from activities other than music (see Figure 5.2) and direct negative effects over employment status in a music position (see Figure 6.1). Although, this should be seen sceptical, residence might stand rather for cultural capital someone has, due to the fact that residence is associated with the shared system of values and believes that someone lives in. Residence was found to have also positive effects over financial support (the amount of sources used by someone to finance his training), suggesting that cultural capital might have a mediated effect over employment status in a music related position. This also might be explored and operationalized better in future research designs, giving insights into the flow of these forms of capital.

If social capital has more the characteristics of a private good than of a public good and it is rivalrous and excludable, then the policy debate regarding the legitimacy of public financing versus private financing of schooling is raised. However, this equity perspective might come in contradiction with the efficiency one, if it is to consider the fact that the size of social network support (amount of sources available for financing education) it is more important than the absolute value of the support (in monetary terms). It follows that the question is not if government should support financially conductors education, but how many other sources for financing do they have besides that.

Regarding the effects of gender over earnings and employment differentials, even though no significant effects were found the current research design does not address the issue of access of women to the conducting profession. It might be that there are no earnings and employment differentials between the men and women members of the Conductors Guild, but that does not say anything about the equality regarding opportunities in getting there.

A final point worth mentioning concerns the way schooling was operationalized as social capital. If Throsby (1996) considered education as a dummy variable and he made the differentiation between professional and general training, in this research design formal education was operationalized as scale, thus giving the possibility of differentiating amongst different levels of education/degrees/diplomas. Moreover, the current design distinguishes between formal education in music and formal education in other fields than music, being more in line with the way dependent variables were operationalized (dichotomy music/non-music, arts/non-arts).

### **7.3 Limitations and suggestions for further research**

First of the limitations of this research design is that does not empirically confront schooling as investment in social capital with schooling as investment in human capital for example. Although it shows a significant effect, it is not known how well a model that includes both forms of capital in the same research design would perform. Moreover, for one of the dimensions of schooling as social capital, namely that of level of diploma/degree, although it contains some aspects of social structures it is most likely that it indicates also something about skills acquirement. As it is already known, investment in skills is traditionally seen in cultural economics as part of human capital. Even though many artistic skills are probably obtained and developed in informal ways rather than via formal education, for the conducting profession, the non-artistic skills (such as the entrepreneurial and communication abilities) are probably gained through schooling too.

Another limitation is that the income in this research project was not measured in absolute values, partly to avoid the currency problem and partly due to concerns regarding the response rate. Therefore, the decision to include self reported percentages of income from different sources was taken. It follows that any attempt to build earnings functions might gain from a clear operationalization and division between human capital, social capital and cultural capital, together with other factors found in the research program of cultural economics as having decisive influence on earnings and employment differentials (i.e. superstar phenomenon, motivation and concern with reputation etc.) can increase the predictive power of the models. More accurate data regarding income (if it is obtainable in absolute values) could also give a better measure of the implied effects.

Furthermore, some limitations regarding the researched populations should be also mentioned. Most definitely not all the active conductors are Conductors Guild members and some others might have lost their interest in conducting on the way. Moreover, due to the underrepresentation of the non-US members in the sample we cannot infer anything regarding differences in the discovered effects between US and European system, for example. Thus, a possible bias in this sense might have occurred and a better sampling in the further research is required for this artistic population.

As suggested above, further research designs should include and confront the explanatory power of all forms of capital with reference to artists' training and education and their effects on earnings and employment. A good operationalization of these concepts might do just that, although it cannot be expected that artists' training should be the only explanant for their output. The artists' labour market studies are mainly focused on the supply side and as for any economic activity, this does not constitute the complete picture of the market forces. Empirical models that would consider both-, demand and supply would be therefore more likely to have greater predictive power over earnings and employment.

Moreover, the issue of defining the artists' population is essential in cultural economics in general and artists' labour market studies in particular. Focusing on a specific artistic occupation might bring more insights than researching broad categories. Even though some distinctions done so far proved to be useful and with relevant results for the empirical and theoretical progress (e.g. performing artists versus creative artists, artists that work individually versus artists that work in a group etc.), it is necessary to consider all the specificities of every single artistic profession.



Finally, the skills and knowledge acquired in cultural economics concerning both-, the artistic field and the methods of research used for investigating it, allow the building of more daring empirical models. Therefore, multi-level, multi-actor and multi-method approaches are possible, necessarily and greatly expected.

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## Appendix I – Questionnaire

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*Below is a letter announcing a new survey for conductors. Please participate by July 7th as your input is greatly needed.*

Dear Conductors Guild Member,

My name is Petru Ciocoiu, a master student at Erasmus University Rotterdam and I am organizing a survey with the support of the Conductors Guild in which you are kindly asked to participate.

By filling in this questionnaire by 7 July (IT TAKES APROXIMATELY 10-15 MINUTES) you contribute to the improvement in the knowledge of how this particular artistic field is functioning today. The confidentiality of the respondents is guaranteed.

After the survey is completed results will be posted on Guild List (or Orchestra List). If you have conductor colleagues or friends that might be interested to participate in this survey you are kindly asked to forward this email to them as well.

At this link you can find the survey:

[https://www.surveymonkey.com/s.aspx?sm=4iCXAReiU00gNu792t1rhA\\_3d\\_3d](https://www.surveymonkey.com/s.aspx?sm=4iCXAReiU00gNu792t1rhA_3d_3d)

Thank you very much for your cooperation!

Petru Ciocoiu  
[petruflorin@yahoo.com](mailto:petruflorin@yahoo.com)

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## Questionnaire

Please consider each question or statement below and answer to each of them in order to progress further with the survey. Some questions allow multiple answers and that is specified where is the case. The anonymity of your responses is guaranteed.

**I. Please estimate in percents (%) from the amount of your total income, how much is derived from the following: (Please only answer positive, whole numbers. The answer choices should sum 100%):**

conducting:

royalties/copyright:

music related job(s):

non-music related job(s):

**II. Please specify if your current main job/function/position is one of the following: (Here you can select more than one answer if necessary.)**

- A. conducting job/function/position
- B. music related job/function/position
- C. non-music related job/function/position

**III. Do you have a degree in music? If no, please select "Not Applicable" to progress. If yes, please choose the level of the last diploma (or correspondent) from the list below:**

- A. elementary school
- B. high-school
- C. bachelor
- D. master
- E. doctorate
- F. post-doctoral
- G. other
- H. not applicable

**IV. Do you have a degree in conducting? If no, please select "Not Applicable" to progress. If yes, please choose the level of the last diploma (or correspondent) from the list below:**

- A. elementary school
- B. high-school
- C. bachelor
- D. master
- E. doctorate
- F. post-doctoral

- G. other  
 H. not applicable

**V. Do you have a degree in a field other than music? If no, please select "Not Applicable" to progress. If yes, please choose the level of diploma (or correspondent) from the list below:**

- A. elementary school  
 B. high-school  
 C. bachelor  
 D. master  
 E. doctorate  
 F. post-doctoral  
 G. other  
 H. not applicable

**VI. Please mention where you got your financial support during your musical education/training. (Here you can select more than one answer if necessary.)**

- A. family  
 B. government  
 C. non-governmental organization  
 D. music related job  
 E. non-music related job  
 F. Other (please specify):

**VII. Do you have an agent/manager?**

- Yes  No

**VIII. Age:**

- under 20  20-25  26-30  31-35  36-40  41-45  46-50  51-55  56-60  
 61-65  66-70  71-75  76-80  over81

**IX. Gender:**

- Female  Male

**X. Nationality:**

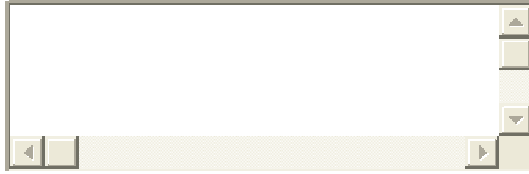
- US  Other than US

**XI. Place of residence:**

- US  Other than US



**XII. If you have some comments or opinion about this survey and the related topic please write it here:**



Thank you for taking the time to complete this survey!

## Appendix II – Other charts and tables

**Table A.1 Coefficients output for model I. The effects of schooling on earnings from music activities**

Model's variables	Sig.	t	Tolerance	VIF
(Constant)	.000	4.894		
music degree	.014	2.502	.987	1.013
other degree	.004	-2.945	.991	1.009
financial	.007	2.742	.981	1.019
support				
age	.048	1.996	.986	1.014

Dependent Variable: income from music

**Table A.2 Coefficients output for model II. The effects of schooling on earnings from other activities**

Model's variables	Sig.	t	Tolerance	VIF
(Constant)	.010	2.608		
other degree	.002	3.143	.984	1.017
financial	.004	-2.942	.986	1.015
support				
residence	.043	2.043	.988	1.012

Dependent Variable: income other

**Table A.3 Coefficients output for model III. The effects of schooling on employment status in a music position**

Model's variables	Sig.	t	Tolerance	VIF
(Constant)	.000	7.808		
other degree	.000	-4.432	.988	1.012
financial	.000	5.228	.959	1.043
support				
age	.010	2.601	.967	1.034
residence	.010	-2.587	.975	1.026

Dependent Variable: music position

**Table A.4 Coefficients output for model IV. The effects of schooling on employment status in other position**

Model's variables	Sig.	t	Tolerance	VIF
(Constant)	.000	4.099		
music degree	.007	-2.712	.992	1.008
other degree	.000	4.450	.992	1.008

Dependent Variable: other position

**Table A.5 Spurious causation I. The effects of financial support on music degree**

Model	R	R Square	Adjusted R Square	Sig. F Change	Durbin-Watson
1	.113 <sup>a</sup>	.013	.009	.052	2.096

a. Predictors: (Constant), financial support

b. Dependent Variable: music degree

**Table A.6 Coefficients for spurious causation I. The effects of financial support on music degree**

Model's variables	Sig.	t	B	Beta	VIF
(Constant)	.000	16.928	3.184		
financial support	.052	1.951	.825	.113	1.000

Dependent Variable: music degree

**Table A.7 Spurious causation II. The effects of age and residence on financial support**

Model	R	R Square	Adjusted R Square	Sig. F Change	Durbin-Watson
1	.156 <sup>a</sup>	.024	.021	.007	
2	.194 <sup>b</sup>	.038	.031	.045	1.867

a. Predictors: (Constant), age

b. Predictors: (Constant), age, residence

c. Dependent Variable: financial support

**Table A.8 Coefficients for spurious causation II. The effects of age and residence on financial support**

Model's variables	Sig.	t	B	Beta	VIF
(Constant)	.000	10.161	.408		
age	.005	-2.855	-.012	-.164	1.005
residence	.045	2.010	.071	.116	1.005

Dependent Variable: financial support