## Music consumption at the dawn of the music industry: the rise of a cultural fad

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Via Po, 53-10124 Torino (Italy) Tel. (+39) 0116704917 - Fax (+39) 0116703895 URL: http//www.de.unito.it

## WORKING PAPER SERIES

## MUSIC CONSUMPTION AT THE DAWN OF THE MUSIC INDUSTRY: THE RISE OF A CULTURAL FAD?

Marco Guerzoni and Massimiliano Nuccio

Dipartimento di Economia "S. Cognetti de Martiis"
LEI \& BRICK - Laboratorio di economia dell'innovazione "Franco Momigliano" Bureau of Research in Innovation, Complexity and Knowledge, Collegio Carlo Alberto

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# Music consumption at the dawn of the music industry: the rise of a cultural fad 

Marco Guerzoni* and Massimiliano Nuccio ${ }^{\dagger}$

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#### Abstract

This paper discusses the extent to which socio-demographic characteristics of consumers and their past consumption are less effective in explaining the decision of purchasing a cultural good than the characteristics of the product itself, which allow imitative behaviors and are at the basis of distinction. While the former approaches are well discussed in the literature, the latter refers to the Bourdieu's idea of objectified cultural capital, which has been rarely explored in empirical works. Because the various explanatory effects interact with each others, the paper tests a theoretical model which matches individual characteristics of the consumer with the properties of the cultural product. Specifically, we discussed the emergence of a new version of a cultural good, which is able to broaden the dimension of the market by gaining quick success in the the audience. This diffusion pattern is a quite rare event, but disruptive for the market and extremely profitable for the producer. The authors label this occurrence disruptive cultural fad and try to understand the determinants of its adoption. The hypotheses of the model are tested on a unique dataset of micro-data of purchasing transactions in Milan in the early $19^{\text {th }}$ century, when the music by Gioachino Rossini emerged as disruptive cultural fad at the dawn of the music industry.


## 1 Introduction

In this paper, a disruptive cultural fad is defined as the emergence of a new version of a cultural good, which is not only successful among existing consumers, but also opens up new markets or attracts new demand segments. These diffusion pattern is a quite rare event, but disruptive for the market and extremely profitable for the producer of the product. In order to understand the determinants of its adoption, the analysis focuses

[^0]on the early music industry in the $19^{\text {th }}$ century when Gioachino Rossini entered the opera scene and the connected rising market ${ }^{1}$.

In 1810 in Venice's San Moise theater, a young Rossini debuted with his first opera "La cambiale del matrimonio". After three years, the largest music store in Northern Italy and monopolist for the city of Milan was selling about 50 pieces of sheet music, none of them by Rossini. After a decade, the same store was selling almost ten times more sheet music and 128 of them were Rossini's opera. Over a decade, the total consumption of sheet music boomed and contextually Rossini had upsurged as a blockbuster. It is not uncommon to observe the coincidence of two events in a market such as its rapid expansion associated with the contextual rise of a specific design or version of a good. In traditional markets, an innovation which addresses new market segments and quickly becomes dominant by changing the mix of attributes of a good is labeled disrupting innovation(Bower \& Christensen 1995).

The focus of this paper is on early-stage cultural industries, but many results might keep some validity in other industries where the cultural component of consumption plays a relevant role (Santagata 2010, p.65). As purely introductory examples, consider the case of Ipod which sold 376.000 pieces in 2003 , with a market share of $33 \%$. Two years after, the market share raised up to $82 \%$. Apple is still by far the market leader and sold about 54 million of Ipod in 2009. Reasons for this success are the appealing design, its hedonic value as well as the direct positive externalities created by the imitation effect. Similarly, Facebook entered in the market of social networks when its competitors such as Myspace constituted already an established reality with 100 millions of active users. However, in 2010 after few years, the market is more than five times larger and Facebook acts as monopolist in the most of countries and market segments with almost 1 billion subscribers.As showed for the Ipod, the disruptive cultural fad coincides with its diffusion into the large commodified market. The case of Rossini and of other products embodying cultural value shows similarity to other disruptive product innovations (Throsby 2003). However, peculiarities of cultural goods should be carefully considered.

This paper is positioned in the multifaceted stream of research defined by Arnould (2005) "consumer culture theory". More specifically, and following the taxonomy suggested by Arnould (2005), this work is an analysis of the socio-historic patterns of consumption where consumption choices are explained by social class hierarchies (Allen 2002, Holt 1997, Holt 1998, Wallendorf 2001), gender (Bristor \& Fischer 1993, Dobscha \& Ozanne 2001, Fischer \& Arnold 1990, Thompson 1996, Thompson \& Haytko 1997, Thompson, Locander \& Pollio 1990), and other formal groups (Wallendorf \& Arnould 1991, Ward \& Reingen 1990). Moreover, the paper takes also into account the mainstream economic literature á

[^1]la Becker and Stigler (1977) at least as control hypothesis. Finally, and quite novel for this stream of research, this paper makes use of concepts taken from economics and management of innovation such as disruptive innovation (Christensen 1997).

Theories in cultural consumption explain purchasing choices with various individual covariates such as cultural factors (repeated consumption, education), demographic factors (gender, age, origin), and socio-economic factors (class, income). On the base of these characteristics, scholars both in the economic and sociological disciplines define cultural consumption as a combination of individualist behavior, imitation, and distinction (Stigler \& Becker 1977, Bourdieu 1984, Peterson \& Simkus 1992). This paper suggests that this framework might not fully apply to the case of disruptive cultural fad, for which product characteristics matter in the quest for imitation and distinction. At least theoretically, this is not entirely new to cultural consumption literature since it has affinity with Bourdieu's notion of objectified capital (Bourdieu 1984). On this theoretical ground, the novelty of this paper is to explain purchasing decisions at the individual level, and thus, the emerging of a disruptive cultural fad, as the matching between characteristics of the product and individual characteristics.

In order to address this challenge, in section 2 the concept of disruptive cultural fad is presented with respect to the traditional concept of disrupting innovation. Section 3 reviews traditional explanatory variables in cultural consumption theory and concludes that they might partially fail in grasping the trigger of a disruptive cultural fad. Thus, other explanatory variables concerning the properties of the good and not of the buyer only are offered. Finally, the paper tests an empirical method to contextually explain consumer choices as a balance between matching characteristics of the cultural product and of the consumer. These hypotheses are tested on a unique dataset of micro-data of purchasing transactions in Milan in the early $19^{\text {th }}$ century. Final remarks draw some possible innovative contribution to understand cultural consumption.

## 2 Disruptive cultural fad

It is widely acknowledged that in many cases the adoption path of a new good follows a logistic (or S-shaped) curve (among other Rogers (1995)): at the beginning it is slow and few pioneers consume it; in a second phase, the process speeds up and, in relative quick span of time, the large majority of potential users adopts the good. Eventually, at a slower pace, late comers are convinced to purchase.

In some cases, even in a stable market, the introduction of new version of a good, which is not necessarily better that its former version, but perceived innovative or just different in few characteristics, is able to reach out an entirely new demand, to activate again the s-shape diffusion process, and additionally to become market leader. In case of consumer goods, Bower and Christensen (1995) labeled this occurrence disruptive
innovation. Along with Christensen, "they [disruptive innovations] offered a different package of attributes valued only in emerging markets remote from, and unimportant to, the mainstream" (Christensen 1997, p. 13). Eventually, the emerging market can turn to be much larger and establishes itself as mainstream. This is precisely the case of examples such as LCD screens, which in the beginning had worse image quality than CRT screens, but they were lighter and with lower battery consumption. Utterback and Acee (2005) pointed out that Christensen (1997) focused on cases where the disruptive product was leveraging on low cost and low performance, but appealing to some unfilled consumers needs with new product characteristics. According to them, the crucial point of a disrupting product is precisely this "powerful means for enlarging and broadening markets and providing new functionality" (Utterback \& Acee 2005, p.1). Scholars in this literature focused very much on the product characteristics which can fulfill the needs of an emerging market.

A similar occurrence can be tracked in the case of cultural consumption. Figure 1 shows a disrupting patter in two industries where the cultural consumption component plays a varying, but always decisive role in purchasing decisions: it has a main relational dimension for the social network platforms (Di Stefano 2010) or an aesthetics dimension in the the upsurge of the Ipod as the dominant design among MP3 portable players (Schiller 2009). This component could have taken an hedonic form in the $19^{\text {th }}$ century rising music industry.

## [Figure 1 about here.]

However, because of the peculiarities of cultural consumption, a perfect isomorphism with disrupting innovation is not possible: as discussed above, the key point in the literature on disrupting innovation consist of the identification of a tangible characteristics addressing a new market, and, in the best scenario, also a proxy for its performance. Because of the nature of a cultural product, this task is not straightforward and, to our knowledge, it has never been accomplished in the literature. However a cultural product can still be viewed as a set of its idiosyncratic characteristics like an artifact (Scott 1997, Santagata 2002) and in the last decades consumer culture theory focused on various aspects defining the idiosyncratic factors of a cultural product: "the past 20 years of consumer culture theory] have produced a flurry or research addressing the sociocultural, experiential, symbolic, and ideological aspects of consumption"(Arnould \& Thompson 2005, p.868).

Given this interdisciplinary approach of consumer culture theory, the literature on disruptive products offers a suggestive methodological hint that might be employed in this research context. The essence of a disruptive product consists of fulfilling consumer needs in different ways; in other words, the diffusion is explained by a new successful matching of product characteristics and consumers desires. In the case of cultural good, in the paper we make use of the idiosyncratic factors of a culture product as discussed in the literature and we try to match them with the individual characteristics of the consumer. On this basis, the actual paper
explains in the next sections the diffusion of a disruptive cultural fad in three steps: (1) definition of proxies of the personal characteristic of the consumers, which explain his/her hedonistic or aesthetic consumption (2) definition of proxies of the product characteristics which fulfill those personal quests, and (3) proposal for an empirical method which can grasp the matching nature of this process.

## 3 The determinants of cultural consumption

This section reviews the literature on cultural consumption and consumer culture theory and examines what kind of variables can be employed to explain a disruptive cultural fad. Looking at the existing economic and sociological literature, both individual and socially-bounded patterns of consumption seem to be predominant: indeed cultural consumption can refer both to the processes of consumption of cultural goods and activities and to a broader act of consumption whereas implies cultural connotation in the choice, the use, the semantic and symbolic meaning of any commodified production (McCracken 1986) . The hypotheses in this paper build upon three related disciplines: cultural economics, which tries to include the social environment in the economic analysis of cultural goods by means of extended utility functions; sociology of culture, mainly based on the seminal work by Pierre Bourdieu; and innovation economics, in particular, focusing on the role of product characteristics and network externalities. The combination of these approaches provide proxies to design the features both of the buyer and of the product.

### 3.1 Cultural Economics: individual variables, past consumption and social belonging

The first approach discussed here applies the mainstream economic framework to the realm of cultural consumption, and in particular to the arts. By focusing on price and income, conventional econometric analysis and demand surveys are informed by the rational choice theory. According to Levi-Garboua and Montmarquette (2003), it is likely that not only arts can be included in the luxury goods and have high income elasticity, but also their demand may increase when prices rise because of some snob effect in their consumption. Nevertheless, there is no consensus around these conclusion, because, in many cases, "this prediction stems more, as yet, from a theoretical conjecture than from well-replicated empirical estimates" (Lévy-Garboua \& Montmarquette 2003, p.211).

In his wide and in-depth review of the empirical literature on the demand for the (performing) arts, Seaman (2006) argues that income elasticity is not adequately estimated because most of the studies are not able to distinguish between the income effect and the substitution effect, whereas the literature agrees that consumption of culture is time intensive and ticket price is only one component of the explicit expense of attending
a live performance. Seaman (2006) concludes that the only stylized facts are that the demand curve is negatively sloped, arts goods are normally related to income and not necessarily considered a luxury, and, finally, that there is some form of positive cross-price elasticity, which turns up in a substitution effect within and across different art forms. More controversial and sometimes contradictory results address the quality of the artistic product (Lévy-Garboua \& Montmarquette 2003) and the importance of socio-demographic variables and lifestyles factors which define the different categories of consumers.

According to Seaman (2006), earlier empirical observations on cultural consumption seem to support the early Baumol and Bowen (1966) conclusion that audience characteristics are very similar across all performing arts types. Both descriptive surveys and econometric estimations have focused on two main results: firstly, that such a consumption is elitarian in terms of education, profession and income, and, secondly, that a sort of homogeneity shapes the choices of art-lovers. It is worth to notice that this same results can take to opposite policy implications: on the one hand, the case for public subsidies to non-for-profit arts has reinforced welfare policies to enlarge the audience and open these institutions to new groups; on the other, by stating that money to arts just foster the leisure of the few and wealthiest of the Western countries, detractors have pushed towards more market-oriented cultural organizations. Along with this, economic research has fixed in the cultivation of taste the paradigm of cultural consumption by including inter-temporal dynamics in the demand models: current arts and cultural demand is especially influenced by past exposure. In particular, along with Stigler and Becker (1977) and Brito and Barros(2005) past consumption can affect the present level of consumption throughout a (positive) rational addiction to artistic activities, which should induce the consumer to forsake part of the actual utility in the perspective of future utility arising from investment in human capital. The key feature of this family of models is that a consumer's utility in any given period depends not just on consumption in that period, but also on consumption capital. Consumption capital is essentially the consumer's ability to enjoy a particular good, which deterministically depends on past consumption of the good and perhaps on other factors. The relevant consequence of such a theory is that "tastes neither change capriciously nor differ importantly between people" (Stigler \& Becker 1977).
For the purpose of this paper, both the level and type of past consumption of culture products is included in the range of covariates to test the following hypothesis:

Hypothesis 1, "individual feature: addiction": the probability for a consumer to join a new disruptive cultural fad depends on his past consumption, which varies across consumers, but not across products.

This first hypothesis not only considers the inter-temporal dynamic of consumption, but introduces and implicitly includes the role of education in the artistic consumption. Probably, almost every paper in cultural economics has underlined and tried to measure the importance of education
in shifting the demand for the arts. Although its influence seems much stronger than that of income (Heilbrun \& Gray 2001), existing models suffer from the well-known multicollinearity problem, given the high correlation between education and other key variables like class, occupation and age. Further problems refer to the definition of human capital in terms of measures of education, distinction between specific arts training and general level of education, and conceptual conflicts over the transmission mechanisms (Seaman 2006). Nevertheless, access to knowledge and learning is recognized crucial to appreciate arts and, according to the stream of literature in the next paragraph, is determinant to shape preferences -which in sociology correspond to the notion of taste.

### 3.2 Sociology of Culture: how class and education shape taste

The sociological literature on cultural consumption has run in analogy with economic theories, but the two disciplines have hardly exchanged and confronted. A milestone in this debate is the work by Pierre Bourdieu, since more recent theories on taste and consumer choice have been built somehow in support of or in opposition to his theoretical framework. Bourdieu (1984) argues that, as cultural consumption and taste are the way in which we classify and we are classified in the society we live in, and as these distinctions are then institutionalized through cultural organizations (museums, theaters, etc.) and educational institutions (school and university), an "ideology of natural taste" is produced. According to this, the authentic and pure appreciation of Art could be possible just thanks to a natural and innate predisposition, possessed only by a limited gifted group, the élite, characterized by the"pure gaze", that fights against the "naïve gaze" of the popular aesthetic, of the masses, who make no clear distinction between art and everyday life.

Bourdieu's most orthodox interpreters can be gathered under the so called homology argument, which recognizes a substantial and necessary correspondence between social stratification and cultural choices, even in a regime of relative autonomy of the art field from the economic capital. The homology argument has two main methodological assumptions. On the one hand, in different areas of social life, the stratification of outcomes may predominantly occur on the basis of either class or status. On the other hand, the status, either defined as a position within a generally recognized hierarchy or seen as the symbolic dimension of the class structure, is expressed by both a specific style of life, encompassing various forms and modes of cultural consumption, and by a common codification of symbols and behaviors within specific classes (Bourdieu 1984).

Distinction between high culture and low culture, between the sacredness of the élite, who reified Art, and the profanity of uncultured masses, became less and less meaningful with the advent of Postmodernism. In this latter perspective, the individualisation argument upsets the previous position and considers other structural variables at the basis of distinction,
like gender, sexuality, age and ethnicity. Any act of consumption can contribute to define individual's self-determined identity and, in particular, cultural products are powerful sources of symbolic capital in the contemporary consumer society: Along with this explanation, cultural consumption and lifestyle are losing their grounding in social stratification and are becoming a matter of self-realization which cuts across classes and choices (Bauman 1988). This apparently heterogeneous and cross-disciplinary literature shares a common point: to explain choices of cultural consumption we need to control for characteristics concerning the subject, whether demographic -such as age, gender, place of residence- or socioeconomic -like class or status.

Hypothesis 2,"individual feature: socio-demographic approach": the probability for a consumer to join a new disruptive cultural fad depends on his demographic characteristics (e.g. gender, place of residence, age) and socio-economic resources (e.g. social class), which vary across consumers, but not across products.

Although demographic and socioeconomic variables have always been employed both in the economic and sociological literature, doubts about their reliability as predictors of arts attendance have been raised by various authors. For example, Andreasen and Belk (1980) found that none of the standard socioeconomic variables adds significantly to the prediction of attendance of classical music and theater, while life-style factors and socialization aspects can be more emphasize to attract marginal or new audience. Similarly, the most recent evolution of the Bourdian approach reconsiders the opposition between highbrow and lowbrow consumption in the cultural field by introducing the omnivore thesis (Peterson \& Simkus 1992): Higher and lower social strata should not differ because of the appreciation of different art forms, but in greater and wider range of cultural consumption. The quantity and the variety of cultural consumption define a new hierarchy of consumers, which ranges from nonconsumers to paucivores to univores, to omnivores up to the cultural voracious. A wide research project conducted on various performing and visual arts in England by Chan and Goldthorpe (2005, 2007b, 2007a) shows that, contrary to the individualisation argument, consumption is in fact strongly patterned and socially stratified. Also, the authors underlines the Weberian distinction between class and status, because omnivorous tendencies are positively associated with status rather than with class. On this line, Holbrook et Al. (2002) pinpointed three effects of cultural consumption: a boundary-effacement effect suggesting that members of the upper class might have similar consumption habits with member of lower classes; a distinction effect suggesting consumption as way to gain social status; and an omnivore effect suggesting that member of the upper class might consume both kinds of products, homogeneous to the lower classes, but also others distinctive for them (Holbrook, Weiss \& Habich 2002).

These contributions point two directions to further explore the issue of cultural consumption. First, in the construction of the models, the difference between attendance/participation and art appreciation derived
by the consumption capital is not incidental to the level of consumption and the elasticity of demand (Stigler \& Becker 1977, Lévy-Garboua \& Montmarquette 2003): the notion of appreciation implies an household production framework where the shadow-price is more than the mere price of the ticket or the cultural good. Accordingly, the very notion of taste by Bourdieu, although it may seem corresponding to preferences more than to behavior, can be expressed in terms of social manifestation and public commitment, and therefore, preferences revealed in cultural participation are more desiderable than statements on cultural taste (Sullivan \& KatzGerro 2007, Chan \& Goldthorpe 2007b). Second, socio-economic and demographic features have a controversial effect on the demand for arts and culture and can help only partially to describe the composition of the shopping basket for different audience segments.

### 3.3 Cultural Capital and Network Externalities

Inspired by the literature on disruptive innovation, it is argued here that in purchasing decisions a relevant role is played by product characteristics as well thus, by a property of the consumed and NOT of the consumers. This is in line with Holt's explicit reference to Bourdieu (Holt 1995, p.1), whose studies from an economic perspectives "...demonstrate that the act of consumption is a varied and effortful accomplishment underdetermined by the characteristics of the object". In order to offer a link between the point of view of Bourdieu and the economic perspective on consumption, it is crucial to recall his notion of cultural capital, because he maintained that culture shares many of the properties that are characteristic of economic capital, or, in other words, that cultural habits and dispositions comprise a resource capable of generating profits (Lareau \& Weininger 2003).

Bourdieu argued that cultural capital exists in three distinct forms: embodied, objectified and institutionalized (Bourdieu 1986, p.47). In its "embodied" form, cultural capital is a competence or skill specific to the person who owns it. In this form, it may correspond to what in economic terms is also defined as human capital, since the acquisition of cultural capital necessarily presupposes an investment of time devoted to learning and/or training. The education within a family, where children acquire cultural capital in term of behavior, knowledge, gait and accent, is a most notable example because these cultural traits reproduce the social fields a person has experienced (Bourdieu 1977, p.94). On the other hand, also the consumption of goods is a way to express the belonging or not to a social field. For this reason objects themselves may function as a form of cultural capital and foster the process of distinction between groups and among individuals. This latter intrinsic feature of an object has a potential explanatory strength when it comes to consumers purchasing decisions. The characteristics which can make a cultural product worth to generate distinction are several such as its rarity, its diversity, its degree of customization (Snyder \& Fromkin 1980, Hazlitt 1818). However, in the case of cultural consumption, the extent to which a product can favor processes of distinction depends on the various use made by other consumers (Kretschmer, Klimis \& Choi 1999, Holt 1995), a proxy which could be
measured by the number of people belonging to the different social fields who have already bought that product. Thus, the larger is the total purchase of a product within a given social field, the higher will be the value of this product for those people willing to imitate that specific social field, the lower for those who seek distinction. If the most of mankind oscillate between imitating some groups of people and distinguishing from others (Hazlitt 1818), the number of people of a specific social group consuming a cultural product is a characteristic of a good which renders it able to fulfill in various degree the need for distinction towards that group. This latest assumption is not only consistent with Holt (1995), but also with Duesenberry (1949), who suggested the the diffusion of a product can serve as publicity for a product. According to Hirsch (1976) products can fulfill the need for distinction if they are in limited quantity and their use is rare.

In the economics literature the idea that the value of a good depends on the intensity of the use made by others is known as network effect. Since the seminal work by Katz and Shapiro and more recently by Economides and Shy, a good deal of articles have been produced linking the number of consumers with the value of a good. For the issue matter of this paper, Windrum and Birchenhall (2002) discuss diffusion of new product as the results of changing network externalities and make explicit reference to Bourdieu .More recently Dutt(2009) explicitly links the value of cultural consumption with positive network externalities, while Safarzynska and Van den Bergh(2010) use negative network externalities to model the snob effect. Similarly di Maggio and Garip (2011) discusses the diffusion of cultural practices of consumption within groups and they model it as the consequence of positive network externalities.

In a different, but related manner, in the neoclassical framework of consumption, market success in the arts has already been studied in the form of the superstar effect (Rosen 1981). The success of one artist is interpreted as a learning process of the consumers because it comes from the early appreciation of a growing numbers of consumers which eventually generate a snowball effect (Adler 1985). Since consumers prefer most popular artists, this would explain the existence of superstars. According with this interpretation of artistic success and in analogy with Becker and Stigler (1977), not only tastes do not differ among individuals, but event talent among artists: the emergence of artistic success is not provided by "talent" (an offer of higher quality), but seems a pure coincidence or "luck" of being chosen and becoming popular when a critical mass is reached and positive network externalities are at work.

Summing up, we suggest to include new variables to explain the cultural consumption choices. They are the network externalities generated by the type of past consumption by specific social group. They are characteristics attached to the cultural product, although they are generated from the consumers. Thus, we will use the level of past consumption of each music author by the various social class to test the following hypothesis:

Hypothesis 3,"objectified feature": the probability for a consumer to join a new disruptive cultural fad depends on the characteristics of the cultural product, which allow the consumer to adopt imitative behavior and distinguish himself/herself from other individuals or classes.

The hypotheses do not suggest that a product's characteristics which can fulfill the quest for distinction are unrelated to the proxies capturing the cultural capital or the social class of belonging of an individual. On the contrary, we believe that these effects interact in an matching procedures. For this reason, in the empirical section we will suggest a model accounting for this process.

## 4 Data, method, and results

### 4.1 Data

Ricordi is the most famous Italian classical music publishing house, founded by the violinist Giovanni Ricordi in 1808 and during the XIX century grown to become one of the largest music publishers in Europe, with branches in different cities. The success of the Ricordi family business was indubitably connected, on the one hand, to the liaison with the theater La Scala in Milan, and, on the other, to the artistic and professional relation with Giuseppe Verdi. This dataset is unique because of two reasons. First of all, in the time span considered, Ricordi was almost monopolist in the reproduction and purchase of sheet music in region of Milan. A monopolistic market structure rules out problems due to different marketing strategies and product qualities.

Secondly and most important, Milan is a good test bed to analyze the dynamics in the music industry during the considered time span. Since the second half of the Eighteenth century, Milan has been an important center of lyric opera. For instance, from 1770 to 1773 three operas by Mozart was premiered at the Teatro Regio Ducale. This theater, destroyed by a fire during a Carneval gala in 1776, was replaced by a new one La Scala, which since then has been considered among the most prestigious location for operas plays. In 1796 Milan became capital of the Napoleonic Cisalpine Republic, and its political role strength the cultural activity.Moreover, socio-economic conditions of the period in consideration rule out the possibility that the increase in the consumption of music was the result of an increase in real income. The best historical account can be found in Rath(1941), which describes the economic recession in Lombardy and Venezia in 1814-1818 and Zanetti and Maltby (1997), which is focused on the city of Milan. At the time of the Congress of Vienna, which returned the city to the Austrian control, both many years of warfare around Europe and the predatory attitude of Napoleonic conquest left Milan in bad economic conditions. Moreover, the terrible conditions of the summer 1816, "the year without a summer", and of following years led to a sequence of famines. "As a result of bad economic conditions, all classes of people suffered considerably" (Rath 1941, pp.310).

Third, the fact that the historical period is pre-mass consumption rules also out all possible endogeneity due to mass media advertising. The Ricordi Historic Archive in Milan is one of the most important music private collection in the world and preserves different documents, manuscripts, libretti, original music sheet, letters, drawings, costumes, photos and posters since the establishment of the Ricordi company in 1808. The archive also keeps the sales journals (libri mastri) of the Ricordi shop in Milan. Information contained in these journals have been accurately transcribed in a dataset and can be considered significant of the purchasing transactions occurred at Ricordi in Milan between 1813 and $1824^{2}$

The dataset employed in this paper contains information about 4666 unique transactions for each of those we have information about the purchased music sheet such as author and work of the music, name, gender, title or profession and city of provenance of the client. Individual characteristic of the buyer like name, gender, the social class and place of origin are extremely useful to draw the segmentation of 1010 individuals who bought at least 1 sheet Music at Ricordi in the selected period. Since in the dataset there are almost 200 authors sold, only the 5 top sellers were selected, which alone account for more than $80 \%$ of all the purchases by 350 different costumers. This choice surely implies some loss of information, but the econometric model that we used does not allow us to have too many choices in the dependent variable, otherwise perfect multicollinearity cannot be avoided. Because of their historical nature, the data might be distorted due to the presence of missing values. Authors share an optimistic view about this problem for two reasons. First of all, as extensively discussed in Baia Curioni (2011), the bookkeeping habits were already codified as best-practices and in use in large business such as Ricordi. Nevertheless, various entries were not regularly compiled and this led to a high percentage of missing values for certain variables. Although we could argue that the presence of those missing values was not a systematic one, and, thus, not leading to any bias in the estimation, we decided not to make uses of those weak variables. For these reason, we do not consider information about the type of music (like for instance Ballet, Opera, Sonata), the acquisition of different product other then sheet music such as music instruments. Concerning the variable employed in the statistical analysis, as Table 2 shows, we have 1156 missing s for the social status and 328 for the gender of the buyer. Once again, we are here confident that the distribution across author of the missing values is not a systematic one. In order to double checked this hypothesis we run various models with and without doubtful variables and results showed to be robust.

[^2]Beside Rossini, the analysis we will consider Asiol $\left.\right|^{3}$. Mercadant $4^{4}$ Vigand ${ }^{5}$, and May1 ${ }^{6}$

### 4.2 Variables

The unit of the analysis is the purchasing transaction of a specific author. In order to test the hypotheses, the econometric analysis tries to explain why a given transaction is preferred to another one as the result of consumer personal and social variables (individual features) and author variables (objectified featured). The dependent variable is a categorical choice variable which assigns each purchasing activity to one of the 5 most sold authors (Asioli, Mercadante, Viganò, Mayr, Rossini). The first graph in Figure 2 shows the evolution over time of the dependent variable over time. It should be noted that the consumption of each author takes place more or less at the same time, but Rossini is increasingly the market leader. There are two groups of covariates $(X$ and $Z)$. The first group X captures individual characteristics and test hypotheses 1 and 2 . Individual characteristics can be either demographic ones (gender and place of residence) or social ones like dummy variables for the social class a consumer belongs to (noble, artist, high Bourgeoisie, low Bourgeoisie). These variables capture the sociological approach, where consumption mirrors social and economic belonging. Here, the past consumption activities of each individual is referring to the cultural resource and might bee considered a proxy of educational resource. Figure 2 shows the frequency evolution over time of some descriptive variables.
[Figure 2 about here.]
In order to capture the socio-economic approach and the rational addiction hypotheses, each single consumer's past consumption is considered in the model. The variable IndPastCons describes the number of sheet music bought by a consumer before a given purchasing transaction. For each transaction, the variables past_ $j$ portrays the number of sheet music of the author $j$ bought by that specific consumer before a given transaction. These variables try to capture the impact of rational addiction. The second group of variables, Z , grasps the objectified characteristics of the cultural product and test hypothesis 3 . For each transaction, we calculate the variable $k$ _effect which describes how many music sheets of the same author had been bought by all of individuals of the social class $k$ before a given purchasing transaction. Figure 3 shows the evolution over time of this variables for the various author by social class. Table 1 describe all the explanatory variables used in the analysis.

[^3][Figure 3 about here.]
[Table 1 about here.]

### 4.3 Method and results

This section tests whether the probability of a transaction to involve the purchase of Rossini depends (a) by individual characteristics such as consumer past consumption, social class, and gender or (b) by characteristics of the authors which are invariant for individuals. The impact of these 2 groups of characteristics is observed upon the probability that an individual $i$ chooses a specific author $j$ (Rossini is included). Formally, following Cameron and Trivedi (2009)this latter concept can be represented as:

$$
\begin{equation*}
p_{i j}=\operatorname{pr}\left[y_{i}=j\right]=F\left(X_{i} ; Z_{j}\right) \quad i=1, \ldots, L \quad j=1, \ldots, K \tag{1}
\end{equation*}
$$

Where $X_{i}$ are the personal features of the L consumers, which are alternative invariant, and $Z_{j}$ are the objectified characteristics which vary across the K alternative authors, but not across individuals; $y_{i}$ is our dependent variable which take value 1 when author $j$ is chosen and 0 otherwise. The model behind is an additive random utility model, where the utility for the consumer $i$ of the choice $j$ is given by

$$
\begin{gather*}
U_{i j}=V_{i j}+\epsilon_{i j}  \tag{2}\\
V_{i j}=x_{i j}^{\prime} \beta+x_{i j}^{\prime} \gamma \tag{3}
\end{gather*}
$$

Where $V_{i j}$ is a deterministic component which depend on varius covariates ( X and Z ), the coefficient ( $\beta$ and $\gamma$ ) are to be estimated, while $\epsilon_{i j}$ is the unobserved random term. A consumer chooses $j$ if $U_{i j}$ is the highest utility, thus the probability that an author $j$ is purchased by the consumer $i$ is

$$
\begin{gather*}
\operatorname{Pr}(y=j)=\operatorname{Pr}\left(U_{i j} \geq U_{i k}\right) \forall k \Leftrightarrow  \tag{4}\\
\operatorname{Pr}\left(V_{i j}+\epsilon_{i j} \geq V_{i k}+\epsilon_{i k}\right) \forall k \Leftrightarrow  \tag{5}\\
\quad \operatorname{Pr}\left(\epsilon_{i j}-\epsilon_{i k} \geq V_{i k}-V_{i j}\right) \forall k \tag{6}
\end{gather*}
$$

As widely acknowledge in microeconometrics, a logistic shape of the cumulative density function F is assumed (McFadden 1980). The presence of both individual invariant and alternative invariant regressors deserve attention. Firstly, the following multinomial logit consider individual invariant variables only:

$$
\begin{equation*}
p_{i j}=\frac{\exp \left(x_{i}^{\prime} \beta_{j}\right)}{\sum_{l=1}^{K} \exp \left(x_{i}^{\prime} \beta_{l}\right)}, \quad j=1, \ldots, K \quad i=1, \ldots, L \tag{7}
\end{equation*}
$$

The model to consider for alternative invariant variables is a conditional logit (McFadden 1984), where consumers are the cases and music authors the alternatives. For the subject matter of this paper, it is to be noticed, that this model can be considered as a counterfactual matching procedure, where the actual transaction, resulted from an individual which specific characteristics ( X ) buying a product defined by the Z variables, is
compared with all other possible combination of consumer-products which could have existed, but they did not take place.

$$
\begin{equation*}
p_{i j}=\frac{\exp \left(x_{i}^{\prime} \beta_{j}+z_{i j}^{\prime} \gamma\right)}{\sum_{l=1}^{K} \exp \left(x_{i}^{\prime} \beta_{l}+z_{i l}^{\prime} \gamma\right)}, \quad j=1, \ldots, K \quad i=1, \ldots, L \tag{8}
\end{equation*}
$$

For each model $\beta$ s and $\gamma \mathrm{s}$ are estimated maximizing the likelihood function. As results Equation 7 generates a coefficient $\beta$ for each variable X. Equation 8 on the contrary generate a coefficient $\gamma$ for each variable Z and then as many coefficients $\beta$ as the number of alternatives for each variable X. Because of the non linearity of the logistic function, the coefficient can not be interpreted as marginal efficient. The calculation of the marginal effect has to be performed keeping in mind that they are not constant, but vary along the quantile of the dependent variable. For this reason, the analysis will show the average marginal effect, which in this case seems to more informative than the effect in the average or in any other single quantile alone.

Table 2 shows some descriptive statistics of the variable used.
[Table 2 about here.]
Because of the computational unease, which requires the computation of dummy variables, each of them interacting with individual specific variables, the model can not consider all of the possible choices. Table 3 shows the results of the multinomial conditional logit of Equation 7 . To avoid identification problem $\beta_{j}$ with $j=$ Rossini is set equal to zero and thus a coefficient has to be interpreted as the effect of each variable on the probability to buy Rossini instead the author reported at top of the column. Hypothesis 1 which tests the ration addiction argument is partly rejected. The total level of past consumption, PastpurchaseInd, does not seem crucial: explaining a disruptive cultural fad means explaining how Rossini managed to attract both new consumers to the music market and individuals already consuming buying other authors. However, looking at a more disaggregated level, an impact of past consumption on present choices can be tracked. Firstly, past consumption of Rossini increases the likelihood of choosing Rossini versus any other author. This factor proves the attraction capability of the disruptive cultural fad. Secondly, even more striking is the fact that the even the past consumption of each other author increases the likelihood of choosing Rossini instead of the author itself. This is an evidence for the capacity of Rossini to drain buyers also from other authors. Moreover, there is some evidence that a past option about single authors, if significant, might influence the choice towards other specific authors. For instance, individuals who bought Mercadante in the past clearly prefer Rossini not only to Mercadante, but also to Pacini and Viganò, while they stay indifferent between Mayr and Rossini. These results suggest that patterns of choice are complex and cannot be mechanically anticipated. On the contrary, any hypothesis regarding an alleged peculiarity in the market of Mercadante should probably take into account a proper musicological analysis, historical and institutional factors, like his relationship with Rossini and Teatro La Scala.

As expected, in the case of a disruptive cultural fad individual variables do not play an decisive role. It is worth noticing that demographic
variables are never significant. Thus, mechanisms of cultural consumption built on a mere structural view of the society do not seem to explain consumers' adoption decisions and a disruptive cultural fad is able to attract consumers from different social groups.
[Table 3 about here.]
Sofar this analysis, which takes into account individual variables only, seems to provide some results: socio-economic variables like personal past consumption, at least when disaggregated, partially explain the success of a disruptive cultural fad. On the contrary, socio-demographic characteristics does not explain any variance of the dependent variable. Unfortunately why consumers made the choice of Rossini in the first place remains so far unexplained. For this reasons, Table 4 depicts results for the multinomial conditional logit where the role of objectified features of the transaction are taken into account. Now, the purchasing decision is explained as the contextual effect of both the individual characteristics above and product characteristics which grasp the objectified features of the cultural product: the characteristic of the product which can fulfill the quest for imitation or distinction is the past consumption of a specific author by the various social classes (variables Noble_eff, Highb_eff, Lowb_eff, Artist_eff). The coefficients of Z variables are the same for all authors. On the contrary, like in the previous regression, coefficients of individual variables are specific to each author. The table presents coefficients only of those variables invariant for individuals, while for variables varying individually, coefficients are depicted in figure 4 as average marginal effect: $7^{7}$ We present here 4 models which differs in the number of control variables used. The reference model is model 4 where we control for the class, gender and origin of the consumer.

Results show that past purchasing activities by nobles and by the high bourgeois do influence the probability of an author to be chosen. The mechanism which makes the disruptive cultural fad work seems to follow two opposite patterns: consumers, independently from their social class of origin tend to imitate purchasing behaviors of the bourgeoisie and reject those by the nobles. Under the historical point of view, it is argued that in the early XIX century Milan, the process of distinction is mainly driven by the new bourgeois groups of professionals and entrepreneurs, who acquired power and responsibility in Italy after the French revolution and in particular after the Napoleonic domination.
[Table 4 about here.]
Figure 4 is consistent with the first regression: individual variables do not explain purchasing choices in a situation characterized by a disruptive cultural fad. The pattern of consumption is rather stable across gender, origin, and past consumption activity. Hypothesis 1 is partly rejected: Past consumption is affecting future consumption, but in a restrictive way. The absolute level of past consumption in music does not explain

[^4]consumption choice today. Individuals seem to choose their musical preferences neither on a generic appreciation for music genres nor on some accumulation of cultural capital, but on a specific knowledge of the composers and musicians. Music appreciation is more likely the outcome of selective patterns and responsive options.

Hypotheses 2 is rejected. Individual characteristics capturing social effects do not seem to be explain a disruptive cultural fad, in the sense that no clear homology effect or structural patterns emerge. On the contrary, hypothesis 3 cannot be rejected. Network externalities generated by the consumption of individuals in different social classes exert a power of attraction or repulsion for the consumers. Distinction should not be considered only as triggered by the individual social status, but also as an intrinsic characteristic of a good, which might or might not fulfill the quest of aspiring to given social field or deny belonging to it.

The central question of the paper was whether these factors can explain the emergence of a disruptive cultural fad. The first two approaches, the socio-economic (rational addiction) and the sociological (distinction) frameworks do not seem to provide the right tools to undertake the analysis of a disruptive cultural fad at least for two reasons.

First, respectively because of their economic mechanicism and sociological determinism, these two approaches are considered reductive since leave both the consumer and the consumed unexplained to a large extent (Lunt 2006). In particular, in socio-economic theories, since the extended utility function is invariant across individuals and time ("de gustibus non est disputandum"), alleged differences across individuals can be explained in choices for personal and social capital. On the other hand, the homology argument could be charged of social determinism since cultural consumption is reduced to mirror individual belonging to social and economic groups. It is not in the aim of this research to draw the discussion around criticism to social economics and critical structuralism. The analysis has tried to point out those elements that are more able to explain the process of preference formation in cultural consumption.

Second, the disruptiveness of a new successful product seems to weaken any role played by the past consumption and by the accumulation of cultural capital. Moreover, the rapid increase of a fad usually conquers consumers from different cultural and economic backgrounds and, thus it excludes major effects of homology, which rely on some social stratification of the consumers' population. Was the former theoretical conclusion right, one can argue that the process of diffusion of such a cultural product is purely random or a question of luck. On the contrary, it is argued here that the social structure does have some form of impact on the consumption of any cultural product, even in the case of disruptive cultural fad.

On this basis, this paper favors the third explanation: the characteristic of a good fulfills consumer's search for distinction. Although it is likely
that individuals adopt cultural products consistently to some forms of distinction, it is arguable whether this quest is merely triggered by cultural and economic stratification at the individual level. Surely, personal and cultural characteristics of individuals play a role in prompting a consumer towards imitation or distinction from a specific social field, but the extent to which a cultural product can fulfill or not the quest for imitation and distinction play a crucial role in determining whether it is chosen or not.
[Figure 4 about here.]

## 5 Conclusion

Though both management and marketing literature widely discussed the existence of disruptive products and explain their diffusion as the results of a matching process between characteristics of the consumers and of the products, still there is a lack of theoretical discussion and empirical evidence about the determinants of disruptive fad in cultural studies. This issue might have importance not only for cultural industries but also for any product where the hedonistic or aesthetic component play a role.

Sofar both economic and sociological literature argued that purchasing decisions in cultural industries are driven by social and personal characteristics. The economic approach dates back to the Stigler and Becker's rational addiction theory, where addiction is not only to be considered in its physiological sense, but rather as a causal effect of past consumption on present consumption. Sociological work stresses, on the contrary, the social belonging of an individual and his demographic characteristics as the main determinants of purchasing decisions.

The first goal of this paper was to empirically investigate these two well acknowledged streams of literature by testing the hypotheses that both past consumption and socio-demographic background of an individual play a role in his purchasing decisions of cultural goods.

A second goal of the paper was to elaborate upon Bourdieu's idea of objectified capital, which suggests that objects themselves may function as a form of cultural capital and foster the process of distinction between groups and individuals. The difference between this intuition and the two previous approaches is that in the former purchasing decisions depends on the properties of the consumed and not on consumer characteristics only. Specifically, we surmised that the properties of a product which might fulfill or not the quest for distinction in the purchase of cultural goods consist of the past consumption of the same good by other individuals. Accordingly, we test the hypothesis that the value of a good is correlated with the past consumption of that good by other individuals. This correlation is expected be positive with the past consumption of individual belonging to groups which are worthy imitating and viceversa.

In order to reach these two goals, the challenge has been double headed. On the one side, we have identified proxies to capture the structure of
past-consumption activities, the social and demographic belonging, and the objectified characteristics of the product. Secondly, we had to put forward a model which could grasp the matching nature of the process which couple individual with a product. The hypotheses have been thereafter tested on a dataset which collects the transaction of sheet music at the dawn of the music industry in Italy, when Gioachino Rossini emerged as cultural fad.

A first econometric model suggests that the rational addiction theory can not be rejected, while both the social class of belonging and various demographic covariates do not have a significant predictive power. In details, we find that consumption choices are not influenced by a generically defined level of past consumption, but options about single authors seem determined by specific patterns which link together intrinsic features of the cultural and artistic production. This conclusion would take to reconsider the notion of rational addiction as neither a standard attitude nor the mere result of degrees of human and cultural capital embedded in the consumer, but as a complex blueprint. Instead of looking at generic purchases, it seems more explicative to find intimate relations among single cultural goods or productive clusters aggregating around single authors or artistic schools. For instance, some hints about the motivations behind consumer choice could be found in the history of the single author and in his artistic evolution. It is not accidental that along with Rossini and among the 4 most purchased artists there are very different artistic histories, but also remarkable points of contact.

A second econometric model brings together both individual characteristics and the past consumption of an author by various social classes and finds that consumptions activities of specific cultural groups influence purchasing decisions. Specifically, results show that early consumers of cultural goods seemed to avoid to buy those authors bought by nobles, while authors bought by the high bourgeoisie seemed to gain a good reputation and diffusion in every social stratus. It is thus argued that purchasing activities of a disruptive cultural fad is not explained by the social belonging. Thus, externalities generated by one specific social class hold erga omnes independently of the class of belonging. This seems to be the crucial characteristic which differentiates a disruptive cultural fad from other products: like the music of Rossini in the $19^{\text {th }}$, pioneer users of any possible disruptive cultural fad generate network externalities and reputation effects, which hold towards all social classes and speed tremendously up the process of adoption. Given the increasing dematerialization of the value in goods and services, these results are not confined only to realm of cultural goods, but they may be extended to various industries.

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Figure 1: Disruptive cultural fads in two industries industries Music Industry early $19^{\text {th }}$ century Social Networks citations in Google Trend


Figure 2: Market evolution

Author


Buyer Origin


Social Class


Gender


Figure 3: Class consumption

Artists


Low Bourgoisie


Nobles


High Bourgoisie


Figure 4: Marginal effects


Past Consumption of Pacini


Buyer Origin


Nobles


Past Consumption of Mayr


Past Consumption of Vigano


Gender


Artist


Past Consumption of Mercadante


Past Consumption of Music


High Bourgeoisie


Low Bourgeoisie


Table 1: Explanatory Variables

| Group | Approach | Variables | Name | Hypothesis |
| :---: | :---: | :---: | :---: | :---: |
| X <br> Personal <br> Features | Socioeconomic <br> Approach | Own Past Consumption | PastpurchaseInd | 1 |
|  |  | Own Consumpt. Rossini | PastindRossini |  |
|  |  | Own Consump.Mercadante | PastindMerc |  |
|  |  | Own Consump. Vigano | Pastindvigano |  |
|  |  | Own Consumpt. Mayr | Pastindmayr |  |
|  |  | Own Consumpt. Pacini | Pastindpacini |  |
| X <br> Personal <br> Features | Sociological Approach | Dummy High Bourgoisie | d_HighB | 2 |
|  |  | Dummy Low Bourgoisie | $\bar{d}_{-} l L w B$ |  |
|  |  | Dummy Noble | $d_{-}^{-}$Noble |  |
|  |  | Dummy Artist | $d_{-}$Artist |  |
|  |  | Gender | $\bar{G} e n d e r$ |  |
|  |  | Milan as Origin | Milan |  |
|  |  | High Bourg. Eff | HighB_eff |  |
| Z | New Beaurdieu | Low Bourg. Eff. | Low B_eff | 3 |
| Objectified | Approach | Nobel Effect | Nobel_eff |  |
| Features |  | Artist effect | Artist_eff |  |

Table 2: Summary Statistics

| Variable | Mean | Std. Dev. | Min. | Max. | N |
| :--- | :---: | :---: | :---: | :---: | :---: |
| d_HighB | 0.116 | 0.321 | 0 | 1 | 3510 |
| d_LowB | 0.067 | 0.249 | 0 | 1 | 3510 |
| d_Noble | 0.307 | 0.461 | 0 | 1 | 3510 |
| d_Artist | 0.461 | 0.499 | 0 | 1 | 3510 |
| Gender | 0.794 | 0.404 | 0 | 1 | 4338 |
| Milano | 0.737 | 0.44 | 0 | 1 | 4666 |
| PastpurchaseInd | 7.304 | 8.533 | 1 | 77 | 4666 |
| PastpurchaseClass | 344.386 | 440.22 | 0 | 2065 | 4666 |
| pastindrossini | 0.789 | 1.54 | 0 | 13 | 4666 |
| pastindvigano | 0.189 | 0.559 | 0 | 5 | 4666 |
| pastindmayr | 0.163 | 0.591 | 0 | 9 | 4666 |
| pastindmer | 0.131 | 0.508 | 0 | 5 | 4666 |
| pastindpacini | 0.112 | 0.517 | 0 | 8 | 4666 |
| pastclassrossini | 29.225 | 43.999 | 0 | 244 | 4666 |
| pastclassviganò | 7.564 | 10.717 | 0 | 51 | 4666 |
| pastclassmayr | 7.712 | 9.177 | 0 | 35 | 4666 |
| pastclassmercadante | 2.863 | 7.024 | 0 | 40 | 4666 |
| pastclasspacini | 3.867 | 5.543 | 0 | 26 | 4666 |

Table 3: Multinomial Logit

| Rossini vs. | Mayr | Mercadante | Pacini | Viganò |
| :--- | :---: | :---: | :---: | :---: |
| Pastindrossini | $0.061^{* * *}$ | $0.368^{* * *}$ | $0.380^{* * *}$ | $0.113^{* * *}$ |
|  | $[0.030]$ | $[0.061]$ | $[0.073]$ | $[0.031]$ |
| Pastindviganò | 1.175 | 0.455 | 1.208 | $8.588^{* * *}$ |
|  | $[0.637]$ | $[0.218]$ | $[0.596]$ | $[2.190]$ |
| Pastindmayr | $46.391^{* * *}$ | 0.738 | 1.901 | 0.305 |
|  | $[26.989]$ | $[0.443]$ | $[1.008]$ | $[0.212]$ |
| Pastindmer | 0.269 | $9.294^{* * *}$ | $0.214^{* *}$ | $0.309^{*}$ |
|  | $[0.317]$ | $[2.490]$ | $[0.114]$ | $[0.169]$ |
| Pastindpacini | $0.028^{*}$ | 1.266 | $9.457^{* * *}$ | $0.080^{*}$ |
|  | $[0.051]$ | $[0.298]$ | $[2.733]$ | $[0.087]$ |
| PastpurchaseInd | 0.972 | 1.044 | 1.037 | $1.080^{*}$ |
|  | $[0.057]$ | $[0.037]$ | $[0.040]$ | $[0.041]$ |
| Milan | 0.857 | 0.848 | 0.789 | 2.719 |
|  | $[0.695]$ | $[0.373]$ | $[0.427]$ | $[1.564]$ |
| Gender | 0.619 | 1.150 | 0.824 | 0.681 |
|  | $[0.484]$ | $[0.579]$ | $[0.419]$ | $[0.321]$ |
| d_LowB | 0.041 | 1.168 | 1.462 | 1.177 |
|  | $[0.283]$ | $[1.152]$ | $[1.609]$ | $[1.262]$ |
| d_Artist | 1.073 | 0.559 | 1.266 | 0.770 |
|  | $[1.227]$ | $[0.464]$ | $[1.131]$ | $[0.664]$ |
| d_HighB | 1.945 | 0.867 | 0.762 | 1.868 |
|  | $[2.725]$ | $[0.778]$ | $[0.768]$ | $[1.800]$ |
| d_Nobel | 1.196 | 0.871 | 0.387 | 0.727 |
|  | $[1.433]$ | $[0.731]$ | $[0.376]$ | $[0.635]$ |
| PseudoR ${ }^{2} 0.585$ |  |  |  |  |
| Observations 733 |  |  |  |  |
| Standard errors in brackets |  |  |  |  |
| * $^{2}<0.05,{ }^{* *} p<0.01,{ }^{* * *} p<0.001$ |  |  |  |  |

Table 4: Multinomial Conditional Logit

|  | (1) | (2) | (3) | (4) |
| :---: | :---: | :---: | :---: | :---: |
| mode <br> Nobel_eff | $\begin{gathered} -0.019 \\ {[0.014]} \end{gathered}$ | $\begin{gathered} -0.023 \\ {[0.015]} \end{gathered}$ | $\begin{gathered} -0.024 \\ {[0.016]} \end{gathered}$ | $\begin{gathered} -0.030^{*} \\ {[0.016]} \end{gathered}$ |
| HighB _eff | $\begin{aligned} & 0.064^{*} \\ & {[0.037]} \end{aligned}$ | $\begin{aligned} & 0.069^{*} \\ & {[0.038]} \end{aligned}$ | $\begin{gathered} 0.087^{* *} \\ {[0.042]} \end{gathered}$ | $\begin{gathered} 0.102^{* *} \\ {[0.043]} \end{gathered}$ |
| LowB _eff | $\begin{gathered} 0.095 \\ {[0.060]} \end{gathered}$ | $\begin{gathered} 0.099 \\ {[0.061]} \end{gathered}$ | $\begin{gathered} 0.084 \\ {[0.070]} \end{gathered}$ | $\begin{gathered} 0.088 \\ {[0.070]} \end{gathered}$ |
| Artist_eff | $\begin{gathered} -0.013 \\ {[0.010]} \end{gathered}$ | $\begin{gathered} -0.012 \\ {[0.010]} \end{gathered}$ | $\begin{gathered} -0.014 \\ {[0.011]} \end{gathered}$ | $\begin{gathered} -0.016 \\ {[0.011]} \\ \hline \end{gathered}$ |
| Pastindrossini | Yes | Yes | Yes | Yes |
| Pastindvigano | Yes | Yes | Yes | Yes |
| Pastindmayr | Yes | Yes | Yes | Yes |
| Pastindmer | Yes | Yes | Yes | Yes |
| Pastindpacini | Yes | Yes | Yes | Yes |
| PastpurchaseInd | Yes | Yes | Yes | Yes |
| Milan |  | Yes |  | Yes |
| Gender |  | Yes |  | Yes |
| d_LowB |  |  | Yes | Yes |
| d_Artist |  |  | Yes | Yes |
| d_HighB |  |  | Yes | Yes |
| d_Noble |  |  | Yes | Yes |
| Obsservations | 4965 | 4590 | 3730 | 3665 |
| LogLikelihood | -499.051 | -474.840 | -382.969 | -376.309 |

Standard errors in brackets
${ }^{*} p<0.05,{ }^{* *} p<0.01,{ }^{* * *} p<0.001$


[^0]:    *Department of Economics "S. Cognetti de Martiis", University of Turin, Via Po, 5310124 Turin, Italy and BRICK Bureau for Research in Innovation, Complexity and Knowledge, Collegio Carlo Alberto.
    ${ }^{\dagger}$ Leuphana Universität Lüneburg Scharnhorststrasse 1, 21335 Lüneburg, Germany

[^1]:    ${ }^{1}$ Gioachino Antonio Rossini (Pesaro, 1792 -Parigi 1868), Italian composer. His work has ranged across many genres, but he is best remembered as one of the greatest opera writers of history, famous author of pieces including La gazza ladra, Il barbiere di Siviglia, Guillame Tell

[^2]:    ${ }^{2}$ Departing from an extensive analysis of the Ricordi Historic Archive and of sources concerning music production in the XIX century, Baia Curioni (2011) has drawn the history of this family and of the relative music business in Milan and Italy.

[^3]:    ${ }^{3}$ Bonifazio Asioli (Correggio, 1769-1832), Italian composer. In 1808, he was appointed Director of the newly formed "Royal Conservatory of Music in Milan, the current "Conservatory Giuseppe Verdi ". He also wrote treatises on music theory and teaching manuals.
    ${ }^{4}$ Giuseppe Saverio Raffaele Mercadante (Altamura, 1795 - Napoli, 1870), Italian composer. He was influenced by Rossini and somehow he was anticipating Verdi's theatre.
    ${ }^{5}$ Salvatore Viganò (Napoli, 1769 - Milano, 1821), Italian ballet dancer, choreographer and composer.
    ${ }^{6}$ Johann Simon Mayr (Mendorf, 1763 - Bergamo, 1845), German composer and music teacher.

[^4]:    ${ }^{7}$ The average marginal effect have been calculated by computing the marginal effect and the confidence interval at each quantile and by calculating the mean. Stata DO file is available on request

