Luis César Herrero Prieto
y Juan Prieto Rodríguez
(eds.)

LA ECONOMÍA DE LA CULTURA: UNA DISCIPLINA JOVEN

ESTUDIOS EN HOMENAJE

AL PROFESOR

VÍCTOR FERNÁNDEZ BLANCO

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"I go, I pay". The impact of cultural experience on willingness to subsidize culture

Bartosz Jusypenko and Aleksandra Wiśniewska

1. Introduction[1]

The public character of cultural goods and recognized non-use values that carry positive external effects create the basis for financing culture from public funds. From the microeconomic perspective, cultural goods' value consists of the use value that can be observed through a person's choices and non-use value that people can assign to goods even though they do not use them directly. In many cases, cultural goods, the view of a picturesque castle on a hill as an example, are non-rival or non-excludable, making them similar to public and mixed goods. Such goods embody or create values that may not be disclosed by the market. Consequently, they are often provided by the public sector.

Moreover, the total value of these goods exceeds their use value. Not participating does not preclude gaining benefits from culture. The idea of non-use value comes from environmental studies, where it was used to show that it is not only users that benefit from nature (Krutilla, 1967). The same situation occurs in the cultural sector. Even non-users participate in "[the] provision of public creative ideas and aesthetic standards, social improvement of participants themselves, development of national feeling and identity, provision of social comment and criticism" (Throsby & Withers, 1979: 176) and experience several social benefits these goods bring like educational value, prestige value, and bequest value (Carson, 2011; Noonan, 2003). Citizens are willing to pay taxes to subsidize cultural goods, even if they are not their direct users (Bille Hansen,

1997; Rushton, 2000), which is a revelation of non-use value that people assign to them. Lack of subsidies compensating for non-use values consumption may result in a lower than the optimal supply of goods characterized by undisclosed demand (Murzyn-Kupisz, 2010; Wiśniewska & Czajkowski, 2019).

This article focuses on willingness to subsidize culture (WSC): people's agreement for financing culture through public budgets. Opposition to subsidies is problematic in the context of conducting cultural policy based on public assistance according to citizens' preferences. Being willing to subsidize is just a step before the willingness to pay for culture through a public budget, a crucial measurement for research-based cultural policies. The study does not consider whether subsidies are justified and what should be their level. We inquire into attitudes that shape answers for such questions: what are the determinants of the social agreement for such donations. In other words: for whom they are justifiable and for whom they are not, and why.

This article aims to study how past and anticipated cultural experiences affect WSC. Due to limited research on WSC itself, this study is based on the literature on demand and willingness to pay for culture (including non-market valuation studies) - regardless of how it is financed, from public or individuals' budgets. We assume that public subsidies for culture are an alternative to private financing.[2] Since many researches show that consuming cultural goods has a significant impact on the demand for these goods, we assume that it plays an equally important role for WSC. Two research hypotheses are tested. Firstly, a positive link between past participation in culture and WSC is examined. The second hypothesis says that the stated future consumption of cultural goods positively influences it. A list of socio-demographic and attitudinal characteristics, which are commonly included in cultural demand functions and therefore may also affect the WSC, is also used in the empirical research.

Additionally, the study undertakes the problem of measuring WSC in survey-based studies. The difficulty arises from the social desirability bias, conviction of respondents that WSC is an attitude recognized by the society as a proper one. Thus, filling in questionnaires, they may overstate their agreement for public assistance. The recognition of such difficulties encouraged us to undertake a conservative approach: to focus only on strong conviction about the need for public financing of culture (strong WSC), treating any degree of opposition or uncertainty as indicators of no real WSC.

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[2] There is a difference between public and private financing. Public financing secures the availability of cultural offer for the whole society, including these citizens, who cannot pay for culture by themselves. The level of subsidies can mirror the preferences of those who can pay for culture and who are even willing to do it but do not participate. In extreme cases, donations enable maintaining culture that nobody uses (e.g., rock paintings that are not available for the public due to special rules of preserving them) based on recognition of its existence value. All these characteristics have been discussed in the literature on public assistance for the arts from the beginning of cultural economics.

The next section presents a review of the literature on the determinants of willingness to subsidize culture to identify variables to be used in the empirical study. Section 3 contains a description of the data and the research methodology used in the study. The econometric results are presented in Section 4. The article ends with a summary of the main observations and presents potential directions for further research.

2. Literature review

Many studies show that experience in consuming cultural goods has a significant impact on the demand for these goods. The relationship between this experience and WSC has been studied to a lesser extent.

Individual demand for cultural goods grows over time with increasing cultural consumption experience (Brito & Barros, 2005; Ginsburgh & Throsby, 2006; Throsby, 2003). Several theories explain this phenomenon with the use of the notion of experience. Cultural goods are classified as experienced goods, characterized by high search costs that lead consumers to experience a good to learn its quality (Nelson, 1970). This feature was also used to distinguish the creative sector characterized by high product change rates (UNCTAD, 2008). Hutter (2015), after Scitovsky, finds culture in a category of products that evoke a sensation of novelty and discovery, important enough to see in the development of the creative sector the rise of a new kind of economy: the joyful economy. Learning-by-consuming is another theory of shaping the preferences related to culture and arts, which states that current demand is related to previous experiences that enable acquisition or discovery of art passion. Uncertainty of the quality of creative products makes consumers learn their utility function through consumption experiences (Seaman, 2006). Positive experience results in raising future expectations upward.

It takes time to get to know culture and appreciate it. Consistent forward-looking behavior, as presented in the theory of rational addiction, helps to invest in cultural experience (as a kind of investment in human capital) currently to raise the utility we gain from such experience in the future (Seaman, 2006). It explains the impact of anticipated future consumption of culture on consuming it. Individuals accept the total current price of addictive goods and the costs of future, increased consumption associated with addiction (Becker & Murphy, 1988; Gruber & Koszegi, 2001). Bonato et al. (1990) estimate the theatrical demand from the perspective of rational addiction theory using past consumption. The rational addiction hypothesis was confirmed in relation to cinema demand in Japan (Yamamura, 2009) and Europe (Sisto & Zanola, 2008). In the European case the coefficients of both past and future consumption are positive and significantly different from zero. However, the future consumption coefficient turns out to be relatively smaller than the previous one. Authors explain this result by tolerance phenomenon which is strictly connected to rational addiction behavior. Tolerance means

that the utility from consumption is lower when the stock of "addictive capital" (past consumption) is greater and it only applies to harmful addictions such as alcohol or cigarettes (Becker & Murphy, 1988; Castiglione & Infante, 2016). Hence, this concept, that would be against the rational addiction theory, is not applicable for the case of cultural goods. Castiglione & Infante (2016) prove that cultural consumers wonder about their future preferences while making decisions concerning current theatre attendance. This result is in line with the rational addiction theory.

There is also a list of cultural consumers' socio-demographic and attitudinal characteristics apart from cultural experience, which is commonly included in cultural demand functions and therefore may affect the WSC. People with higher income appreciate culture more widely, supporting subsidizing it (Benito *et al.*, 2013; Getzner, 2002; Lewis & Rushton, 2007). Consumers usually prefer financing culture through a public wallet rather than private savings (Feder & Katz-Gerro, 2012).

The impact of parenthood and age on the WSC is ambiguous. People raising children more often show intergenerational altruism, which results in increased WSC. Nevertheless, the high alternative cost of leisure that limits cultural participation for some parents might outweigh the benefits derived from culture and result in disagreement for government intervention in this field (Werck *et al.*, 2008). On the same basis, the low alternative cost of time for older people may lead them to support culture's public financing. However, due to public budget constraints, growth in one sector must be financed by a reduction in another sector. A high percentage of older people increases public health spending, and a high percentage of young people increases education spending, leading to lower public expenditure on culture (Benito *et al.*, 2013).

People with higher education create demand for art and are more likely to support it financially (Brooks, 2001; DiMaggio & Pettit, 1999; Lewis & Rushton, 2007). Education increases pleasure derived from culture and art (Benito *et al.*, 2013). First of all, people with higher education consume culture more frequently; thus, they are have higher marginal utility and more likely to use cultural goods according to the rational addiction theory. Secondly, people with higher education should value art more because they are a part of the environment in which it is appreciated. Moreover, people who inherited good education from well-educated parents probably experienced culture as children, which results in the fact that they better understand and appreciate it as adults.

According to DiMaggio & Pettit (1999), the primary determinant of WSC is simply a support for interventions of the public sector in other fields. If someone thinks that the government should increase spending on the environment or medical care, they also believe that it should increase spending on culture and the arts. Therefore, probably, those who oppose the introduction of taxes in general will also not accept culture subsidies. As DiMaggio & Petit (1999) reveal, they do so because culture is not a salient

issue for citizens. Even though they generally perform broad support for such subsidies, it is rather shallow. Most of them know little about arts spending and artistic programs supported publicly. Consequently, attitudes presented in public opinion questionnaires can be constructed on the spot and vulnerable to changes in the survey design and the latest news about art projects. In this context, cultural attendance appears again as a significant subsidy support predictor for «reasons both public-spirited they believe more strongly than other people in the arts' value to society) and self-interested (government art programs may subsidize ticket prices)" (DiMaggio & Pettit, 1999: 19-20), reducing the impact of other variables.

The literature considering determinants of individual attitudes towards taxation and redistribution, overwhelmingly well-structured as rational decisions among which the policy status quo is the most popular choice (Hansen, 1998), delivers an essential context for this study. There are two basic explanations for these attitudes: the first one stresses narrow financial self-interest calculus that results in support for increasing income redistribution by people who benefit financially, and opposition from the side of citizens who are net payers (Meltzer & Richard, 1981). Contrary, the fairness view reveals the role of others' preferences, reciprocity, and fairness considerations in the individual optimization calculus (Fehr & Gächter, 2002; Hennighausen & Heinemann, 2015). It means that people may support public policies, including cultural policy because they find them equitable.

3. Description of the database and methodology

The database used in this work is based on a survey commissioned by the University of Warsaw to an opinion polling company in 2014. The sample included 1699 inhabitants of Warsaw who settle their taxes in the city and are representative in terms of sex, age, and education. The survey concerns participation in Warsaw's cultural life: preferences related to visits to theaters, cinemas, and museums, attitude towards public subsidies, and the perception of culture in general.

We measure WSC with the respondents' attitude to the statement: «Cultural activities should be subsidized from public funds». The dependent variable, called *dotcul*, uses the coding directly from the survey, where a 5-point Likert scale was used: 1 states for «I strongly agree», 5 for «I strongly disagree (please, note: the higher the number, the weaker the willingness to subsidies culture). Table 1 shows the number and frequency of the answers. The results are in line with the literature. The vast majority of the population (80%) agree, in whole or in part, with public subsidies for culture. Notably, nearly 35% of the sample performs strong WSC.

Table 1. Meaning, number and frequency of the variables *dotcul* and relation between variables *dotcul* and *experience*.

"Cultural activities should be subsidized from public funds"	*dotcul*	Frequency *dotcul* (%)	Mean value of *experience*	The share of people who declare lack of participation (experience = 0)	The share of people who declare low participation (*experience* < 5)
I strongly agree	1	34.49	10.31	4.44 %	22.7 %
I rather agree	2	44.91	8.68	7.73 %	30.93 %
I do not know	3	6.83	7.72	12.93 %	44.83 %
I rather disagree	4	9.71	8.5	12.12 %	36.97 %
I strongly disagree	5	4.06	9.39	8.7 %	31.88 %

A key independent variable *experience*, which is the sum of the number of visits to Warsaw's cultural institutions over the last year, describes past cultural goods consumption. Due to the database's limitations, it does not refer to any type of these goods, but only to three representative ones: visits to theaters, cinemas, and museums. The average number of visits to the cinemas during a year among the respondents was just over 4, to theaters almost 3, and to museums under 2. Considered in a sum, they reflect participation in cultural life in general - without assessing these experiences' characteristics. Due to the limit applied to responses (maximum 12 per year for each type of institution), the variable's maximum value is 36, although some respondents could participate in culture more often. The mean value of *experience* is 9.19.

The variable *next* is the sum of the variables regarding the stated future visits to theaters in the next 12 months. Its mean value is significantly lower than *experience* and is equal to 3.3. In the survey, the respondents were only asked about the future consumption of theatre performances, so the *next* variable is not the perfect equivalent of the *experience* variable for future consumption. However, we assume that *next* is the approximation of the planned participation in culture in general. It should be taken into account that the declaration of many visits to theatre does not necessarily mean frequent visits to cinema or museum.

Past consumption of culture is highly correlated with the stated future consumption of culture (Pearson correlation coefficient=0.5). This is intuitive: those who actively participated in culture in the past will probably state frequent participation in the future. As the preliminary econometric analysis showed, the *experience* variable included in the same model took over the significance of the *next* variable. Therefore, two independent sets of models were estimated: one with the *experience* variable among independent variables, the second with a variable *next*. They are presented in a separate subsection in the next part of the article.

Several following attitudinal and socio-demographic variables presumably affecting the dependent variable were also selected. We included monthly net income (in 100 PLN) - variable *monc* (mean equal 30.9). 303 people did

not answer any of the income-related questions. Therefore, the models were estimated for 1397 respondents. The sample includes people of a mean age equal to 44,95 (variable *age*). The *age2* variable, the square of *age*, was introduced to test the quadratic dependence of age. The variable *edugroup* indicates the level of education: primary (16% of the sample), secondary (43%), or high (41%). 81% of the respondents did paid work in the twelve months prior to conducting the survey (variable *havejob*). The survey enabled identifying current parents of underage children: the discrete variable has four levels (1 for 0 children, 2 - 1 child, 3 - 2 children, 4 - three or more children). A couple of attitudinal variables were also used: *mottax* (attitude towards the statement "I am against the introduction of any additional taxes») and *motcultu* («I care about the future condition of culture in Warsaw») with answers provided on a 5-point Likert scale. Based on the number of children accompanying respondents during the last visit to the museum, cinema and theatre binary variables were created (respectively: *musaccch2, cinaccch2, thaccch2*), which show whether a child (or children) accompanied the respondent. It was true in 46% of museum visits, 62% of cinema visits, and 58% of theater visits.

Since the variable *dotcul* consists of a finite number of values (from 1 to 5) measured on an ordinal scale, an ordered probit model can be used to perform the regression for this variable. To interpret the results, the marginal effects obtained for each of the five levels of *dotcul* should be calculated. In this study, this model serves to identify the relationship between variable *dotcul* and *experience* and between *dotcul* and *next*.

Since the coefficients are not interpreted in the ordered probit model, the marginal effects were calculated. For continuous variables, they are interpreted as the effect of a unit change in the independent variable on the probability of success (in this case: the probability for performing each level of WSC). For discrete variables, they are interpreted as the difference between the probability of success for the level of the dependent variable equal to 0 and equal to 1 for the other variables set at the average value and the base levels of other discrete variables.

The first regression included all selected independent variables. Many of them, including all socio-demographic variables (education, gender, age, employment, and parenthood), turned out to be insignificant, which made carrying out the correct interpretation of the results impossible. As no transformations of these variables helped, they had to be removed from the model. Another regression with a limited number of variables was carried out. LR test (likelihood-ratio test) confirmed the correctness of the restrictions. This solution was also supported by the observation of DiMaggio & Pettit (1999), according to which annual participation in art reduces the impact of other variables on support for subsidies.

4. The results of the empirical study

4.1. Past participation in culture

Table 2. Coefficients and marginal effects of ordered probit.[3]

Variable	Coefficient	Marginal effects				
	dotcul	dotcul=1	dotcul=2	dotcul=3	dotcul=4	dotcul=5
Participation in culture *(experience)*	-0.009562**	0.003533**	-0.001051**	-0.000639**	-0.001240**	-0.000603**
Income *(monc)*	0.000023**	-0.000008**	0.000003**	0.000002**	0.000003**	0.000001**
Accompanying children: museum *(musaccch2)*	-0.123122*	0.045486*	-0.013537*	-0.008225*	-0.015961*	-0.007764*
Accompanying children: cinema *(cinaccch2)*	0.057615	-0.021285	0.006335	0.003849	0.007469	0.003633
Accompanying children: theatre *(thaccch2)*	0.060161	-0.022226	0.006615	0.004019	0.007799	0.003794
I care about future condition of culture *(motcultu)*						
I rather agree	0.398058***	-0.147059***	0.043765***	0.025662***	0.051601***	0.025102***
I do not know	0.598930***	-0.221270***	0.065851***	0.040010***	0.077640***	0.037769**
I rather disagree	0.772395***	-0.285355***	0.084923***	0.051598***	0.100127***	0.048707***
I strongly disagree	0.780151***	-0.288221***	0.085775***	0.052116***	0.101132***	0.049197***
I object to new taxes *(mottax)*						
I rather agree	-0.485809***	0.179478***	-0.053413**	-0.032454***	-0.062976***	-0.030635***
I do not know	-0.460505***	0.170130***	-0.050631	-0.030763***	-0.059696***	-0.029040***
I rather disagree	-0.564160***	0.208424***	-0.062028***	-0.037688***	-0.073133***	-0.035576***
I strongly disagree	-0.932569***	0.344530***	-0.102533***	-0.062298***	-0.120891***	-0.058808***

Notes: Baseline levels: no accompanying children (museum, cinema, theatre), I care about the future condition of culture (I strongly agree), I object to new taxes (I strongly agree). Asterisk indicates significance levels (***1 %, **5 %, *10 %).

First, we present the ordered probit result for the dependent variable *dotcul* and the independent variable *experience*. Please, remind that the variable *dotcul* is based on respondents' attitude to the statement: «Cultural activities should be subsidized from public funds» and is coded according to a 5-point Lickert scale as follows: 1 states for "I strongly agree", 5 for "I strongly disagree (the higher the number, the weaker the WSC).

The results are presented in Table 2. The increase in participation in culture (*experience*) raises the probability of strong WSC (*dotcul*=1), while for other levels of WSC (less than strong) this impact is negative. An increase in

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[3] The conclusions drawn from the interpretation of odds ratios from the probit model are consistent with the interpretation of partial effects and are not presented in this article.

cultural participation by one visit per year raises the likelihood of strong WSC by 0.35 percentage point. Simultaneously, a decrease in cultural visits by one annually diminishes relatively equally the probability of any other attitude towards public support for culture by less than 0.1 percentage points. It means that cultural participation can help people's willingness to subsidize culture, but only when a strong conviction is questioned.

This difference between the impact of independent variables on the probability of strong WSC and other levels of WSC is striking. If a given variable raises the probability of strong WSC, it always diminishes the probability that a person will state any other attitude towards subsidizing culture (from strong disagreement to weak agreement). For example, the increase in income by PLN 100 leads to a reduction in the likelihood of strong WSC by 0.08 percentage point, and it raises the probability of any other level of WSC by 0.03 percentage point or less. First, the increase in income results in an increase in consumption, which, in turn, raises the revenues of cultural institutions and reduces the need for subsidies. Wealthy culture lovers may disagree with public subsidies that could lead to paying more and getting less (if access to cultural goods is more common, then the consumption of cultural goods by people who have benefited so far can decrease, at least when exclusion from the consumption is possible).

Children's company during the last visit to cultural venue brings ambiguous results for the WSC. People visiting museums with a child are more likely to provide strong support for public subsidies by 4.5 percentage points. At the same time, they are less likely to present any other attitude. The probability that they are strongly against subsidies diminishes by 0.78 percentage point, that they are rather against - by 1.6 percentage point, that they are indifferent - by 0.82 percentage point, and that they provide only weak support - by 1.35 percentage points. Thus, the presence of children in museums makes us more convinced to spend public money on culture. The children's company during visits to cinemas and theaters turned out to be statistically insignificant in this model. People assign educational value rather to museums than to theaters or cinemas. Museums also enhance the sense of national pride that parents may want to engraft in their children. Moreover, we can also refer to the influence of the bequest value. We want to preserve cultural heritage stored in museums' warehouses for future generations (e.g., our grandchildren). Finally, people perceive museums as publicly funded entities, especially when they commonly meet no entry or low prices for children. Their awareness about public support for theaters or cinemas (though it exists) can be much weaker as significant entry fees in these institutions might be a sign of private operation. Additionally, people visiting theaters are generally wealthier (the correlation between *monc* and *thaccch2* is positive and amounts to 0.134). They might not have to rely on the support of the public sector. Therefore, they do not recognize the need for subsidies. Also, a visit to a theater or cinema with a child may be perceived as an artistic or entertainment experience rather than an

educational one. Thus, private financing may seem adequate (there are no such substantial premises that the theatrical experience would be widely available).

People who do not care about the future condition of culture in Warsaw have a 28.82 percentage point lower probability of strong support for subsidies than people who care much. In the case of strong WSC, for indifferent people and those who rather ignore the future condition of culture in the city, the probability is from 14.71 to 28.54 percentage points smaller than those who definitely care about it. Contrary, the likelihood of any other attitude towards subsidies than strong support raises with a lack of interest in the state of Warsaw culture. The lower this interest, the higher the probability that a person performs disagreement, indifference, or only weak agreement for public support for culture. The results confirm that if people pay attention to culture in general, they also think that the public sector is the right body to support it.

Attitudes towards taxation and redistribution are significant for WSC, as well as for other public spending. In the survey, we asked only about people's attitude towards new taxes. [4] People who totally agree to introduce new taxes are 34.45 percentage points more likely to strongly support state subsidies for culture than those who entirely oppose any new taxes. People unconvinced to the introduction of further taxes have from 17.01 to 20.84 percentage points higher probability of strong WSC than those who completely oppose new taxes. Lack of objections towards new taxes also raises the likelihood of weak support for subsidizing culture *(dotcul=2)*, but it diminishes disagreement and indifference towards these donations.

4.2. Future participation in culture

The impact of future participation of culture is hypothetically similarly significant for WSC as past consumption. Variables *experience* and *next* cannot be used in the same model due to their high correlation. This subsection presents empirical results for the model with the variable *next*. Table 3 presents the result of an ordered probit model.

The increase in the stated future number of visits to theaters in the next twelve months by one increases the probability of WSC by 0.50 percentage points. The result is in line with the assumptions of the theory of rational addiction and confirms our hypothesis that the size of future consumption has a positive and significant impact on the willingness to subsidize culture now. What is more, the impact of planned future consumption is as high and as statistically significant as the past consumption. The explanation of the impact of future consumption may also be found in the option value. People

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[4] Please, note that we asked only about people's attitude towards new taxes, not their current level. People may accept a current level and at the same time object to an introduction of additional public expenditures.

Table 3. Coefficients and marginal effects of ordered probit

Variable	Coefficient	Marginal effects				
	dotcul	dotcul=1	dotcul=2	dotcul=3	dotcul=4	dotcul=5
Future participation in culture *(next)*	-0.013617**	0.005030**	-0.001497**	-0.000911**	-0.001766**	-0.000855**
Income *(monc)*	0.000020**	-0.000008**	0.000002*	0.000001*	0.000003**	0.000001**
Accompanying children: museum *(musaccch2)*	-0.138187**	0.051042**	-0.015193**	-0.009246**	-0.017924**	-0.008678**
Accompanying children: cinema *(cinaccch2)*	0.047822	-0.017664	0.005258	0.003200	0.006203	0.003003
Accompanying children: theatre *(thaccch2)*	0.060180	-0.022229	0.006617	0.004027	0.007806	0.003779
I care about future condition of culture *(motcultu)*						
I rather agree	0.398248***	-0.147099***	0.043786***	0.026648***	0.051656***	0.025010***
I do not know	0.591728***	-0.218564***	0.065058***	0.039594***	0.076753***	0.037160***
I rather disagree	0.760421***	-0.280874***	0.083605***	0.050088***	0.098634***	0.047754***
I strongly disagree	0.791330***	-0.292290***	0.087003***	0.052950***	0.102643***	0.049695***
I object to new taxes *(mottax)*						
I rather agree	0.491400***	0.181506***	-0.054027**	-0.032880***	-0.063740***	-0.030860***
I do not know	0.470606***	0.173826***	-0.051741	-0.031489***	-0.061042***	-0.029554***
I rather disagree	0.558973***	0.206465***	-0.061457***	-0.037402***	-0.072504***	-0.035103***
I strongly disagree	0.927326***	0.342523***	-0.101956***	-0.062049***	-0.120283***	-0.058236***

Notes: Baseline levels: no accompanying children (museum, cinema, theatre), I care about the future condition of culture (I strongly agree), I object to new taxes (I strongly agree). Asterisk indicates significance levels (***1 %, **5 %, *10 %).

who plan frequent future visits must ensure the possibility of future consumption. Public subsidies can be one of the solutions.

For the rest of the independent variables, the ordered probit model with variable *next* (future participation in culture) delivers similar estimations to the ordered probit with variable *experience* (past participation in culture) presented in the previous subsection.

4.3. Difference between strong WSC and other attitudes towards subsidies

The econometric results reveal a clear difference between two groups of respondents: these who strongly agree with public subsidies and all the other levels of the response from 2 («I rather agree») to 5 («I strongly disagree») that we can interpret together as an attitude opposite to the strong positive one. First of all, it is worth noting that the dotcul variable levels' variation is relatively high. The number of levels from 3 («I do not know») to 5 («I strongly disagree») was tiny compared to 1 («I strongly agree») and 2 («I rather agree») that can affect econometric results of the ordered probit model. More importantly, this phenomenon, clear distinction of strong WSC, can be related to social desirability bias that can affect people's statements about socially preferable attitudes, that agreement with public subsidies for culture can be an example of. Social desirability bias results from respondents' inclination to self-

presentation in the best possible light, and it causes many problems in survey-based research (DeMaio, 1984; Groves *et al.*, 2009). Assumingly, the respondents avoid disagreement with public support for culture (indicating, e.g., «rather agree» or «do not know» options), due to their conviction that supporting spending public budget on culture is a socially preferable attitude (regardless which side would be subsidized: supply or demand). They can try to build a better picture of themselves based on the survey and thus feel better. Culture research suffers from this bias, as well as studies in health, religious or addiction, and sex life issues (Rushton, 2000). Finally, a certainty of statements has been found as an important factor determining the reliability of cultural valuation studies (Bedate *et al.*, 2009; Herrero *et al.*, 2012). Thus, strong agreement with public subsidies for culture can also be an indication of the reliability of conclusions drawn on the basis of the responses of people performing such attitude.

To understand it better, we should focus once again on the relationship between variables *dotcul* and *experience*. The mean value for the variable *experience* is similar for all *dotcul* levels (Table 1). However, a smaller share of people does not participate in culture in the case of those fully supporting subsidies for culture (4.44% compared with more than 7% for the rest of the variable *dotcul* levels). Similarly, people who declare strong support for subsidies significantly more rarely declare low participation level (number of visits in cultural institutions less than five per year). Less than 23% of people fully agreeing with subsidies state low participation level, while, for example, among people who are indifferent to subsidies it is almost 45%. Therefore, we can speak of a higher «saturation» with the cultural experiences of people who unquestionably willing to subsidize culture. This is another reason to note the difference between respondents declaring strong support for subsidies and others.

The gradual increase in cultural experiences does not result in a smooth transition from the level 5 («I strongly disagree») to the level 1 («I strongly agree») of *dotcul*. The increase in experience raises the probability of transition to the level 1 of the *dotcul* from all other variable levels in a similar way. The size of the negative coefficients for 2-4 levels of *dotcul* turn out not to be ordered with respect to the assumptions (the more cultural experiences, the more positive attitude towards public support for culture). On the contrary: an increase of *experience* impacts the probability of strong opposition to public subsidies (*dotcul*=5) the least negatively, and the most negative effect was observed for *dotcul*=2 («I rather agree»). Thus, we observe the fundamental difference between strong consent for subsidies and partial consent or uncertainty about subsidies. It seems that the transition of attitude towards subsidies (from any level of *dotcul* to *dotcul*=1) is sudden. We suppose that to agree with public subsidies, a person must «immerse in culture», «be saturated with it» and thus exceed a certain threshold of the experience.

4.4. Socio-demographic determinants of participation in culture

Most socio-demographic variables turned out to be insignificant for WSC, which is in line with the ambiguous results presented in the literature. Despite that, they can have a significant indirect impact on WSC by influencing participation in culture. For simplicity, we used only past participation in culture (*experience*) to test this hypothesis. Linear regression was performed on a normalized *experience* variable (*zexperience*), including socio-demographic variables as independent variables. Table 4 shows the results of regression with statistically significant variables.

The interpretation of the results allows distinguishing a group of people who, on average, most actively participate in culture and the group that does not participate at all or participates least actively. As the income increases, the number of visits to cinemas, museums, and theaters goes up. None of the three examined types of institutions is fully public - admission fees are sometimes high (especially in theaters). It is worth recalling that the impact of income on WSC is the opposite - i.e., it is negative. The wealthier people participate more actively in culture, but the increase in income also decreases the likelihood of strong WSC by these people.

Table 4. Linear regression with a normalized variable *experience* as dependent variable

Variable	Coefficient	St. err.
Income *(monc)*	0. 0049***	0. 0013
Education *(edugroup)*		
Secondary	0.2760***	0.0692
High	0.5531***	0.0748
Age (age)	-0.02437**	0.0096
Age square (age2)	0.0002**	0.0001
Paid job *(havejob)*		
Yes	0.2485***	0.0654
Constant	-0.0325	0.2003

Notes: Baseline levels: primary education and no paid work over the last year. Asterisk indicates signifcance levels (***1 %, **5 %, *10 %).

Higher education's statistically significant and positive influence is in line with the literature, which suggests that mostly educated people create demand for culture and art. As predicted, people with secondary education more often participate in culture than those with primary education. People who performed paid work during the last year were more likely to participate in culture. However, the income criterion and general life activity prevail lower alternative cost of time of the unemployed.

With increasing age, participation in culture is growing, but slowly. Maximum of the square function is achieved for a person aged 64. For people over 64 years, the relationship between age and participation in culture is negative: the number of visits decreases faster as the age increases. As Polish

people over 65 are retiring, this result shows that the decline in cultural activity is associated with professional activity. Interestingly, according to DiMaggio & Pettit (1999), old age is associated with an aversion to public subsidies. However, age was not a statistically significant variable in our model explaining support for culture's public financing.

5. Summary

The study results show that the experience of participation in culture has a positive impact and is crucial for the willingness to subsidize culture. The result is consistent with earlier observations about experienced goods and the theory of learning-by-consuming. The hypothesis based on rational addiction theory was also confirmed: the anticipated future consumption of culture exerts a positive and significant influence on the WSC. The impact of the past experience is equal to the impact of the future one.

The sudden change from an opponent's position to the position of a person supporting the subsidies is an original observation. We suggest that changing attitude requires exceeding a certain threshold of experience and does not change gradually as participation in culture increases.

Most of the socio-demographic variables considered in this study turned out to be insignificant for WSC. The result is consistent with the literature, which also rarely deliver unambiguous results. Nevertheless, if people care about culture in general, they are also more inclined to support public subsidies to culture. WSC is discouraged by high income and generally negative attitude to paying taxes. Children's mere possession does not determine support for subsidizing culture, but their accompany in museum does.

If we want society to accept public expenses for culture, we need to ensure a sufficiently high level of cultural participation and raise awareness about the public sector's role in financing public goods, exemplified by cultural goods. Public subsidies for culture are unjustified for people who do not participate in it. As cultural goods generate benefits for the whole society, not participating in culture does not preclude using them. Nevertheless, not participating regularly in culture, people are probably not sufficiently aware or convinced of the existence of these benefits. They can classify them as private goods, which they do not report demand for. We need to make sure that people are strongly willing to subsidize culture because there is a risk that any degree of opposition or even uncertainty indicates no real WSC. The group that participates in culture the least often and consequently supports public donations for culture the least includes people with low income (no participation in culture) and the wealthy (opposition to public sector intermediation), pensioners, and people without higher education.

This paper allows indicating the directions of further research regarding WSC. First, the study results can be confirmed using variables that would express the future and past consumption of culture more fully. Primarily, they

could include more diverse cultural experiences. Subsequently, it would be possible to expand the research group to include the nationwide sample to use the residence region in models. It would also be possible to add variables defining religious beliefs, the level of private subsidies, and clear political views that significantly impact the position taken in this matter. A more in-depth investigation into the nature of the change of attitude, and thus an attempt to set a specific threshold of cultural experience, with which members of society are starting to support public subsidies, might also bring interesting results. Development of studies on WSC expressed in the form of attitudinal variables could serve as a groundwork for any attempts to measure willingness to pay for culture in more precise, monetary terms.

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