ARTISTS' SUBSIDY OF THE ARTS

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SUMMARY:

It is a commonplace in the arts that artists implicitly subsidize the arts by accepting low financial rewards for their efforts. This paper seeks to define and evaluate this notion of 'hidden subsidy' and to demonstrate how it can be measured. Using earnings function analysis and recent data for Australia, it is calculated that artists' foregone income is about four times the recent level of direct subsidy of Australian arts. The economic validity of terming this a 'hidden subsidy' is examined.
ARTISTS' SUBSIDY OF THE ARTS

Table of Contents

I  Introduction ................................................................. 1

II Definition and Measurement of "Hidden Subsidy"........... 3

III Australian Artists' Earnings and "Hidden Subsidy"....... 5

IV Statistical Results ....................................................... 7

V  Evaluation ................................................................. 9
1. Introduction

It is a commonplace amongst those involved in the arts that artists themselves substantially subsidise the arts by accepting low incomes. As the Canadian Federal Cultural Policy Review Committee (1980:10) wrote:

Too many artists, dancers, singers, writers and others are being asked, in effect, to give a personal financial subsidy to cultural activity—through their acceptance of low financial rewards for their efforts.

This paper seeks to use recent evidence for the case of Australia to examine if this notion is true and, if so, to measure the extent of the subsidy. It is found that there is substantial foregone income incurred by artists and that it considerably exceeds the levels of direct subsidy of the arts in Australia. However it is not clear that this is truly a subsidy, as opposed to a measure of the joys of the artistic life.

A major deficiency in cultural economics in the past has been lack of analysis of the individual artist, particularly in terms of the artists' labour market position. Early exceptions were Panasuk (1974) and Santos (1976) plus some studies of artists in particular art forms (e.g. Peacock and Weir, 1977). Fortunately this deficiency is now being remedied, with improvements in Census classification of artists, (partly in response to arts' group representations), and with funding agency sponsorship of survey research in the arts. An excellent example of the latter is the Australia Council (1983) study, The Artist in Australia Today, a report largely written by David Throsby. In this and other recent similar reports the labour market position of artists is documented in glorious detail. Their incomes can be separated into artistic and non-artistic, dispersion around the average can be examined, differences across the art forms can be reviewed etc. Such statistical richness moves us beyond the anecdotal or impressionistic. But such quantification is to date almost invariably descriptive, not analytical. And it is still used only to illustrate subsidy to the arts provided by artists. For example, in the Australia Council (1983) study broad brush comparisons are made with chosen groups such as professionals. Such comparisons are suggestive but of limited value, as can be seen from Table 1 which provides us with earnings comparisons for Australia 1981/82.
<table>
<thead>
<tr>
<th>Group</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artist - all income</td>
<td>16,300</td>
</tr>
<tr>
<td>- arts related income</td>
<td>9,950</td>
</tr>
<tr>
<td>All persons with earned income</td>
<td>9,421</td>
</tr>
<tr>
<td>Mean annual income, all persons</td>
<td>9,656</td>
</tr>
<tr>
<td>Full year, full time workers</td>
<td>16,851</td>
</tr>
<tr>
<td>All workers with post-school qualifications</td>
<td>17,663</td>
</tr>
<tr>
<td>Professional &amp; Technical Full time workers</td>
<td>20,009</td>
</tr>
<tr>
<td>Administrative &amp; Executive Full Time workers</td>
<td>20,671</td>
</tr>
</tbody>
</table>


If the basis of comparison is arts-related income compared to professional or executive incomes, as chosen in the Australia Council study, then there is a clear average income deficiency. On the other hand a greater proportion of artists are part-time, their schooling and qualifications are less than executives and professionals, and there are a higher proportion of females and overseas born, who typically receive lower incomes than local-born males. Hence a lower income relative to professionals is to be expected. If instead the basis for comparison is all persons with earned income or even all persons who are full year, full time workers then artists actually do quite well, especially if their non-arts-related income is recognised. But artists have generally spent more time in schooling and in obtaining post-school qualifications and they work longer hours than the average work force participant, so that a higher than average income might be expected.

The point should be obvious. A fair comparison of earnings requires full recognition of the various determinants of earnings, and a knowledge of how these vary across occupational groups. Accordingly the next section of the paper seeks to precisely define the relevant subsidy measure that is being advocated and to
indicate how it can be measured appropriately, taking direct account of the determinants of earnings.

II. Definition and Measurement of "Hidden Subsidy"

The economic notion underlying the concept of "hidden subsidy" put forward by the Canadian Cultural Policy Committee and others is that of 'opportunity cost'. The subsidy is the difference between the earnings of an artist and the earnings that would have been received in the best alternative occupation, given the skills and abilities of the individuals concerned. If this opportunity cost is higher than artists' actual earnings then the foregone income is the measure of "hidden subsidy". If foregone earnings are aggregated across all artists, then a measure of total "hidden subsidy" to the arts by artists is obtained. For current earnings of artists, EA, and potential earnings in their next best alternative use, EC, the subsidy is

\[ S = \sum_{i=1}^{n} (EA_i - EC_i), \text{ for artists } i = 1, \ldots, n. \]

For this formula, EA is known but how can opportunity cost (EC) and hence foregone earnings (EA-EC) be estimated? One approach is to compare artists' earnings with those of others of similar characteristics. This can be done by controlling for the individual determinants of earnings such as age, gender, birthplace, education, training, experience etc. If these factors are held constant statistically then remaining earnings discrepancies do represent the opportunity cost of pursuing an artistic career.

An economic method for controlling for the individual determinants of earnings is to use earnings function estimates. The earnings function approach seeks to explain wage variation as a consequence of differences in the training and experience of individuals. Such work typically uses an earnings function in which cross-sectional variations in wages, earnings or income are explained in a regression model using schooling, experience and ability. It is possible to incorporate structural factors into such an exercise by estimating the model with additional structural variables, or by doing separate estimations for each structural category e.g. gender, birthplace, region, occupation, industry.

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1 This exposition follows Mincer and Polacheck (1974) and Chapman and Miller (1983).
The earnings function is a useful tool because it allows an investigation of the independent contributions to wage variation of both job and individual characteristics. On the one hand, it is possible to determine the association between wages and so-called human capital endowments of persons within a particular occupation and industry. On the other hand, the technique allows an examination of the independent contribution of the structural factors, holding constant human capital endowments of the persons employed in the category.

The human capital earnings function is traditionally developed as follows:

\[ E_t = u_{t-1} + rC_{t-1} \]  

where \( E_t \) is gross earnings in period \( t \), \( C_{t-1} \) is the dollar amount of net investment in period \( t-1 \) and \( r \) is the average rate of return to the individual's investment in human capital. If the proportion of investment expenditures to gross earnings, \( C_{t-1}/E_t \), is given by \( k_t \), then, by viewing investment in time-equivalent units,

\[ E_t = E_{t-1}(1 + rk_{t-1}) \]  

Since \( E_t = E_0 (1 + rk_0)(1 + rk_1)...(1 + rk_{t-1}) \), and since \( \ln(1+rx) = rx \) for small values of \( rk \), equation (2) may be rewritten as:

\[ \ln E_t = \ln E_0 + r \sum_{j=0}^{t-1} k_j \]  

Analysing schooling and postschool experience, we can separate the \( k \) terms, giving

\[ \ln E_t = \ln E_0 + \sum_{i=0}^{s-1} k_i + r \sum_{j=S}^{t-1} k_j \]  

where \( k_i \) and \( k_j \) are respectively investment ratios during and after the schooling period. Assuming \( k_i = 1 \),

\[ \ln E_t = \ln E_0 + rs + r \sum_{j=S}^{t-1} k_j \]  

Since postschooling investments are expected to decline over the lifetime (as retirement approaches, the expected return from investment falls), equation (5) may be approximated with the inclusion of a quadratic experience term. Thus the estimating equation becomes:

\[ \ln w_t = a + gS + cG + d(G^2) + eQ + fZ + \epsilon \]
where, for individual $i$, $\ln w_i$ is the logarithm of hourly wage, $\mathbf{GX}X$ is length of time in the labour force, $Z$ is a vector of other wage determining variables, and $e_i$ is a randomly-distributed error term. In the equation general schooling $G_1$ is distinguished from trade and technical qualifications $G_2$.

In relation to estimating opportunity cost for artists, the earnings function (6) can be used in two ways. The first is to estimate aggregate earnings functions for the general work force. Then the particular values of the explanatory variables (schooling, experience, age, sex etc) that apply on average for artists are imposed to obtain thereby a prediction of earnings that would be received on average for those specific characteristics. These predicted earnings are the opportunity cost estimate and can be compared with artists' actual earnings in order to determine the income foregone and hence any "hidden subsidy".

A second use of the earnings function approach is to estimate specific earnings functions separately for various occupation groups, including artists. By comparing the artists' earnings function with functions for other occupations insights are then gained into the sources of earnings differentials as they arise from differing rates of return to schooling, training and experience or from differential treatment of socio-demographic characteristics such as gender or birth-place.

III. Australian Artists' Earnings and "Hidden Subsidy"

The Australia Council (1983) study provides appropriate data for examining the position of artists themselves. This is important since the Australian Census classifications for artists are inadequate to appropriate analysis of the occupation. However the Census provides the necessary data for non-artists. For this purpose data from the 1976 Census can be used and indeed it is convenient to go direct to earnings function estimates already made (Chapman and Miller, 1983) from that Census data. Results using the Chapman-Miller earnings functions can be readily updated to 1981/82, using the rate of increase in average earnings since 1976. This updating permits a matching with the Australia Council survey data which referred to 1981/82 income.

The Chapman-Miller estimates of earnings functions are given in Table 2. They are presented for the separate groups of Australian-born/overseas-born and male/female. The earnings function specification employed for these groups is precisely that of equation (6) above, and thus follows the standard format.
derived from human capital theory. Moreover the division into these sub-groups is also in accord with procedures proposed by human capital analysis to control for differences in the structure of earnings determination (Welch 1973, Oaxaca 1973).

Table 2 Australia: Regression Estimates of Determinants of Log Hourly Income (\$)

<table>
<thead>
<tr>
<th></th>
<th>Constant</th>
<th>S</th>
<th>GEXP</th>
<th>GEXP²</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Australian</td>
<td>-0.438</td>
<td>0.111</td>
<td>0.052</td>
<td>-0.0098</td>
<td>0.138</td>
</tr>
<tr>
<td>Born Males</td>
<td>(4.44)</td>
<td>(20.10)</td>
<td>(11.79)</td>
<td>(10.19)</td>
<td>(5.59)</td>
</tr>
<tr>
<td>B. Overseas</td>
<td>0.199</td>
<td>0.075</td>
<td>0.034</td>
<td>-0.0066</td>
<td>0.089</td>
</tr>
<tr>
<td>Born Males</td>
<td>(1.55)</td>
<td>(19.85)</td>
<td>(9.36)</td>
<td>(8.49)</td>
<td>(4.76)</td>
</tr>
<tr>
<td>C. Australian</td>
<td>-0.420</td>
<td>0.108</td>
<td>0.038</td>
<td>-0.0007</td>
<td>0.127</td>
</tr>
<tr>
<td>Born Females</td>
<td>(3.08)</td>
<td>(12.37)</td>
<td>(7.28)</td>
<td>(6.46)</td>
<td>(4.34)</td>
</tr>
<tr>
<td>D. Overseas</td>
<td>0.920</td>
<td>0.078</td>
<td>0.022</td>
<td>-0.0004</td>
<td>0.086</td>
</tr>
<tr>
<td>Born Females</td>
<td>(0.23)</td>
<td>(15.52)</td>
<td>(4.02)</td>
<td>(4.32)</td>
<td>(4.42)</td>
</tr>
</tbody>
</table>

From the Australia Council survey the necessary data on average schooling, experience and qualifications can be obtained for each of the four socio-demographic groups distinguished. Hourly income predictions can thus be obtained for each group separately and then aggregated on a weighted basis according to the group share in the artistic population. The resultant average hourly income prediction is then updated to 1981-82 by the 1975-76 to 1981-82 movement in average earnings, and compared to actual hourly income for artists in 1981/82 as given by the Australia Council survey.

It should be noted that schooling is a continuous variable, as is experience. Schooling years are imputed from the highest level of schooling or post-school general qualification achieved, and experience is imputed on the standard formula of age minus schooling minus 5, a convention that overstates work force experience, particularly for females.\(^2\) The trade qualification variable is dichotomous with respect to individuals and for the group refers to the proportion of persons with specific vocational trade or technical qualifications. Table 3 compares the artist group characteristics with the Australian work force characteristics for the Chapman-Miller estimation.

\(^2\) To the extent artists have a higher proportion of females and a lower economic return to experience, estimate of foregone income will be understated.
Table 3  Statistical Characteristics of the Data

<table>
<thead>
<tr>
<th></th>
<th>Workforce</th>
<th>Artists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of Schooling (mean)</td>
<td>10.98</td>
<td>14.39</td>
</tr>
<tr>
<td>Years of Experience (mean)</td>
<td>17.70</td>
<td>22.65</td>
</tr>
<tr>
<td>Qualifications %</td>
<td>22</td>
<td>43.0</td>
</tr>
<tr>
<td>Hourly Gross Income ($ 1981/82)</td>
<td>6.91</td>
<td>6.20</td>
</tr>
<tr>
<td>Percentage overseas born</td>
<td>26</td>
<td>32.29</td>
</tr>
<tr>
<td>Percentage female</td>
<td>35.01</td>
<td>48.25</td>
</tr>
<tr>
<td>Weekly hours worked</td>
<td>37.70</td>
<td>46.34</td>
</tr>
<tr>
<td>Observations</td>
<td>6,511,000</td>
<td>976</td>
</tr>
</tbody>
</table>

IV. Statistical Results

The results for the procedure outlined are summarised in Table 4. The table gives 1981/82 predicted and actual income for each of the relevant population sub-groups within the arts and for artists as a whole. The broad conclusion is that in 1981/82 artists received an hourly income 42% below what they could have expected to receive for their work-related and personal characteristics elsewhere in the general work-force. This is an average foregone income of $4.50 per hour. The loss was least for overseas born male artists and greatest for Australian born female artists, but the group differences are not large.

Table 4  Predicted vs Actual Artists' Income ($ 1981/82 per hour)

<table>
<thead>
<tr>
<th>Group</th>
<th>Actual Income</th>
<th>Predicted Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian-born Males</td>
<td>6.90</td>
<td>12.90</td>
</tr>
<tr>
<td>Overseas-born Males</td>
<td>7.81</td>
<td>13.17</td>
</tr>
<tr>
<td>Australian-born Females</td>
<td>4.91</td>
<td>8.78</td>
</tr>
<tr>
<td>Overseas-born Females</td>
<td>4.36</td>
<td>7.29</td>
</tr>
<tr>
<td>All Artists</td>
<td>6.20</td>
<td>10.70</td>
</tr>
</tbody>
</table>
By working a longer average work week, artists were able to make up some of this deficiency as calculated on an hourly basis, but only at the expense of foregone leisure. On a standard work week basis of 30 hours, the gross annual income foregone per artist is $8822. This is the average hidden pecuniary subsidy provided to the arts in 1981/82 by artists. If this were multiplied by the Australia Council’s (1983) estimate of 30,000 professional artists in Australia, the total subsidy is therefore $245 million.

This figure can be updated to 1983/4 by the increase in average weekly earnings over the period. This gives an implicit subsidy of $318 million.

Some perspective is provided by recognising that the total Australia Council appropriation in 1983/84 was $37.9 million. If arts grants from all sources are calculated, including other federal authorities and state and local governments, the total 1982/83 level of grants has been estimated at $78.5 million (Study Group on Federal and State Funding of the Arts, 1984). In 1983/84 dollars this represents $86.7 million. Using the definition of ‘hidden subsidy’ in terms of foregone income, artists subsidise the arts at almost four times the total level of grant subsidy from general taxation. Moreover, the average artist contributed an average of $10,613 (via foregone income) for the arts. The average taxpayer provided $8.61 in arts grants.

Why should this foregone income of artists be so large? We can turn for the formal explanation to the earnings function for the arts. If equation (6) is estimated for all artists in the Australia Council (1983) survey the following result is obtained (t statistics in parenthesis):

\[ W_i = 0.20700 + 0.1393 GS + 0.00939 - 0.00016 \]
\[ (1.785) \quad (1.975) \quad (2.144) \quad (-1.920) \]
\[ 0.04706 \quad R^2 = 0.012 \]
\[ (0.921) \]

It is evident that while schooling, experience and qualifications do contribute positively to explaining arts income, they do so only in a weak and minor way. Unlike the equations for the general work force, in Table 2, ‘human capital’ characteristics are not very important in explaining artists’ wages. As one might well have predicted from casual observation, the arts are an area in which

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3 This imputes foregone leisure at the average hourly wage. If no valuation is attached to artists' foregone leisure the income differential is $8036 p.a. or a 28.9% deficiency.
individual innate characteristics (motivation? talent? luck?) determine earnings.\(^4\)

V. Evaluation

One important conceptual issue remains. The estimate of foregone income developed here corresponds to the notion of "hidden subsidy" propounded by the Canadian Cultural Policy Review Committee and others of like mind. But this is a strictly materialistic definition of subsidy. In particular it takes no account of non-pecuniary considerations. Yet persons considering arts employment will have evaluated both the financial returns and the nature of life as an artist, relative to other jobs. That is, an individual \(i\) will become an artist if:

\[
EA_i > EC_i + GEC_i,
\]

where \(d\) is net taste for the artistic life. Thus where \(d\) is positive an individual is quite willing to accept a financial loss in order to pursue an artistic occupation, to the extent of \(EC_i - EA_i \leq GEC_i\). The implication is that artists' foregone income may be nothing more than the compensating differential for the net advantages of an occupation freely chosen.

Accordingly the reservation wage \(EA^*_i\) for entering an artistic career is given as:

\[
EA^*_i = EC_i + dGEC_i,
\]

which indicates the artist's earnings at which an individual is indifferent between arts and the next best career. The cumulative frequency distribution of reservation wages \(EA^*_i\) across the population is the supply curve of artists, in relation to alternative levels of artists' earnings. Those who enter an artistic career at relatively low wages are those with a low alternative income and/or with a strong preference for the non-pecuniary aspects of an artistic life.

Finally, note that the subsidy concept also ignores risk considerations. Yet the variance of earnings is much higher in arts than for most other occupations. Thus if there is a probability \(P\) of a low arts income \(EA_L\), and a probability \((1-P)\) of a high arts income \(EA_H\), then expected income is

\[
EA = P(EA_L) + (1-P) EA_H
\]

\(^4\) This is a conclusion affirmed also by more detailed analysis of earnings functions for particular types of artists e.g. Snooks (1983), Throsby (1984).
If this expected income is lower than the income from a riskless alternative BE then, despite the actuarial disadvantage and putting aside taste considerations, BA may still be preferred by risk-taking individuals. Individuals may voluntarily accept uncertainty and be willing to suffer a loss in the light of the possibility of high income. Naturally a symmetric risk analysis could also apply to the distribution of non-pecuniary rewards in the arts.

Santos (1976:257) expressed both of these qualifications more felicitously in concluding that:

even though expected income urges the sagacity of Noel Coward's spruculent advice 'Don't put you daughter on the Stage, Mrs Worthington' and suggests that such counsel be accorded none, risk preference and psychic income apparently prevail over financial considerations when considering the pursuit of a career in the performing arts.

Clearly the more narrow definition of "hidden subsidy" based on foregone income will be happily adopted by arts advocates to support their case for more public funding. And it is a meaningful and important notion. But there is a delicious irony in the fact that the broader non-materialist concerns immediately evident to economists will thus be happily ignored by the arts advocates.

Indeed it would be remiss for an economist not to point out that similar arguments and measurement can be made for any occupation receiving less than average financial return to workforce characteristics, though it seems likely that artists will measure more foregone income than most. Sir Arthur Lewis (1965:34) put the economists' view well some years ago:

There will always be occupations which attract too many people - farming, teaching, shop-keeping, music, acting, and many others - and the economy will always retaliate by paying people in these occupations less than they could earn in others. They, in turn, resenting this, will do whatever they can to get higher rewards, by restricting entry to their trades, by tariffs and quotas, by parity-price formulas, or by any other regulative device for which they can win acceptance. Their philosophers... will wrangle among themselves over these devices, some supporting, others denouncing, and yet others confining themselves to measuring.
References


