Chapter 6. Demand for GLAC related goods and services

6.1. Introduction - the rationale for an investigation of the demand for GLAC related goods and services

Chapter 5 has comprehensively mapped out the specifics of the supply side of the GLAC goods and services sector, identifying its direct and indirect economic impact, together with the ascertainable trends, the rationale for the involvement of producers, and their perceptions of their impact of their work.

In order to achieve an overall understanding of the market for such goods, it was also necessary to undertake a survey of the demand side – comprising of demand from the general public, and also from the businesses who perceived an advantage in using GLAC related goods in their day to day work. Details and methodology adopted for both surveys are given in Chapter 4.

An understanding of the factors behind demand, together with its constraints, once integrated with supply side information will thus allow an overall evaluation of current policy towards the GLAC sub-sector of the Gaelic economy.

6.1.1. Structure of the chapter

By necessity the very detailed responses received in relation to the large scale consumer demand survey are reported in a rather mechanistic manner, to enable the isolation of the factors behind demand. This is outlined in sections 6.3 and 6.4, pages 199 and 225, with a brief overall summary of consumption trends in relation to this in section 6.5, page 240.

Following this, results of the survey in terms of factors perceived by consumers to be constraints on their demand for GLAC related products are reported in section 6.6, page 245.

In addition to investigating the factors behind demand, the impact of consumption on views is important to consider. Amongst the reasons for this is the potential effect of consumption on the future demand for GLAC related products; on whether GLAC consumption is seen as beneficial for issues such as community confidence (and thus

possibly local business confidence); migration and in-migration etc. These questions are analysed in section 6.7 page 248 below.

Similarly, to better understand the issue of consumption and non-consumption, further analysis was made of the respective characteristics of consumers and non-consumers in relation to the characteristics of the sample as a whole. The implications of the differences thus found are outlined below in section 6.7.2 page 256.

Finally, Gaelic related goods and services were examined to ascertain which categories (i.e. live arts/ books/ CDs etc) were perceived to have the greatest impact on views. The results of this analysis are also found below in section 6.7.2 page 256.

6.2. The consumption of GLAC related goods and services

6.2.1. Explanatory note to section 6.2

This section consists of logit models for the areas of consumption shown in Table 6-1

Table 6-1 Areas of consumption analysed in section 6.2

Live Events:	***Section***	***Tables***	**Gaelic related goods**	***Section***	***Tables***
Concerts/ Ceilidhs	6.3.1	Table 6-3	The purchase of CDs/ Tapes/ records	6.4.1	Table 6-18
Musical Performances in Clubs/Pubs	6.3.2	Table 6-5	Children's Book Purchases	6.4.2	Table 6-20
Choirs	6.3.3	Table 6-7	Gaelic Book Purchases	6.4.3	Table 6-22
Traditional Dance	6.3.4	Table 6-9	Sheet Music	6.4.4	Table 6-23
Exhibitions/ Interpretive Projects/ local history	6.3.5	Table 6-11	Videos	6.4.5	Table 6-25
Plays/ Theatres/ Panto		Table 6-13	Arts, Crafts and Print products	6.4.6	Table 6-26
Poetry/ Story telling		Table 6-15			
Psalm Singing		Table 6-15			

Tables have been constructed for each of the models, and are followed by an interpretation of the model.

Section 6.5 below page 240, goes on to summarise some of the findings, and looks at patterns raised by: Locality/ Rurality; Income; Gender; Age; Fluency

6.2.2. How to interpret the tables:

Each model normally consists of 2 tables – firstly a table consisting of the General and Interactive Logit Model, and secondly a table of odds ratios. The general methodology behind this approach has already been outlined in Chapter 4

Interpreting the General and Interactive Logit Models

The keys used for each factor in the General and Interactive models are outlined in Table 6-2:

Table 6-2 Key to General and Interactive Model Tables

Key	Significance	Comments
Location(1)	'Urban/town', (as opposed to 'rural')	
Income(1)	'Below median income', (as opposed to 'above median income')	
Gender(1)	'Male'	
Age(1)	Aged 35 or below	
Age(2)	Aged 36 – 59	
Age(3)	Age group 60+	This group is not specifically shown in each table, but can be calculated from Age 1 & 2 odds
Spoken Gaelic(1)	'Has some Gaelic' as opposed to 'no Gaelic'	

In all tables within this section, the odds of the main effects (i.e. the factors stated above), are shown in the last column of the table. These are the odds as compared to the sample average . For example, Table 6-3, page 200, Main Effect Location (1) (someone living in an urban location) has odds of 0.84 of attendance compared to the sample average.

The odds of attending compared to someone living in a rural setting, would of course be different – and where appropriate this latter measure is used from time to time for illustration purposes in the analysis. The column of Z values are the standard significance levels (i.e. 1.96 at 5%). The 'Estimate' column refers to the parameter estimate given in SPSS.

Interpreting the Odds ratios tables

When two way (or three way) interactions take place in the General and Interactive Model, their odds need further manipulation before use. Thus the Odds given in these rows in the General and Interactive model, need disregarded, and attention instead should be given to the 'Odds Ratios' tables, printed directly below each General and `Interactive Model Table. These illustrate how the main effects work over the different layers of the model.

Within the Odds Ratios tables, the odds referred to are not against the sample averages, but against the relevant opposite dichotomous variable.

Thus in Table 6-4 below, page 202, the two way Gender/ Age odds ratio, tells us that amongst the younger category (18 – 35) of attendees, males are more likely to attend than females by a factor of 1.20 , in the middle aged category they are less likely to attend to a factor of 0.72 etc

6.3. Consumption of Live Events

6.3.1. Gaelic musical performances - i.e. concerts/ceilidhs

The likelihood of attending concerts/ceilidhs is shown in Table 6-3

Table 6-3 General and Interactive Logit Models for Concerts/Ceilidhs

Table 6-3a: General Logit Model

Parameter	Estimate	Z Value	Odds
Intercept	0.2896	5.3472	1.34
Main Effects			
Location(1)	-0.1798	-3.3160	0.84
Income(1)	-0.1639	-3.0701	0.85
Model: $Log\,\lambda_{lm} = \lambda + \lambda^{L}_{l} + \lambda^{Y}_{m}$	Statistics:	$\chi^2 = 0.1238$, $df = 1$, $p = 0.725$	

*Table 6-3b**: Interactive Logit Model***

Parameter	Estimate	Z Value	Odds
Intercept	0.3316	6.5048	1.39
Main Effects			
Gender(1)	-0.0272	-0.5338	0.97
Age(1)	0.1476	1.9618	1.16
Age(2)	0.2944	4.1034	1.40
Spoken Gaelic(1)	0.1540	3.0208	1.17
Two-way Interactions			
Gender(1) x Age(1)	0.1174	1.5619	1.12
Gender(1) x Age(2)	-0.1329	-1.9421	0.87
Gender(1) x Spoken Gaelic(1)	0.0496	0.9719	1.05
Age(1) x Spoken Gaelic(1)	0.1258	1.6725	1.13
Age(2) x Spoken Gaelic(1)	-0.0214	-0.2977	0.98
Three-way Interaction			
Gender(1) x Age(1) x Spoken Gaelic(1)	0.0743	0.9872	1.08
Gender(1) x Age(2) x Spoken Gaelic(1)	-0.1958	-2.7302	0.82
Model: *Saturated*	Statistics:	$\chi^2 = 0.0000$, $df = 0$, $p = 1.000$	

For the general model, the goodness of fit statistics indicate that this is an acceptable fit, and all variables included were found to be statistically significant at the 5% level. As indicated above, no significant interactions were found. Accordingly, living in an

urban area is found to reduce the odds of attendance to a factor of 0.84, against the average and likewise being on a low income reduces these odds by 0.85. It would appear therefore that those living in rural areas on higher incomes are more likely to attend.

For the interactive model, the estimated model is saturated as all variables and interactions were found to be significant. Whilst this does not allow parsimony, as the main focus of this work is to establish the significance of these variables and analyse the interactions, this is not an issue.

Of the main effects, gender is found to be not significant, hence this is a gender neutral activity. Age and the level of Spoken Gaelic on the other hand are found to have major impacts. The age main effect strongly indicates that it is those in the middle age bracket that are most likely to attend this activity, whilst the young are also more likely to attend. Those with a high level of spoken Gaelic are also more likely to attend than English speakers. Several two-way interactions are found to be significant, those being these between Gender and Age and Age and the level of Spoken Gaelic. These are presented, along with the three way interaction, in Table 6-4 as odds ratios

Table 6-4 Odds Ratios from Table 6-3b (Ceilidhs/ concerts)

Gender/Age Odds Ratio

	Younger	M.Aged	Older
Male	1.7672	1.6477	0.8559
Female	1.4755	2.2984	0.8652
Odds Ratios	1.20	0.72	0.99

Gender/ Spoken Gaelic Odds Ratio

	Fluent Gaelic	English Speakers
Male	1.6620	1.1061
Female	1.5892	1.2897
	1.05	0.86

Age/ Spoken Gaelic Odds Ratio

	Younger	M.Aged	Older
Fluent	2.1361	2.2220	0.9043
English	1.2207	1.7044	0.8189
	1.75	1.30	1.10

Gender/Age/Spoken Gaelic Odds Ratios

Fluent Gaelic

	Younger	M.Aged	Older
Male	2.6461	1.6255	1.0673
Female	1.7244	3.0374	0.7662
Odds. Ratio	1.53	0.54	1.39

English Speakers

	Younger	M.Aged	Older
Male	1.180	1.670	0.686
Female	1.263	1.739	0.977
Odds Ratio	0.93	0.96	0.70

The gender/age interaction shows that for the oldest age category, women are just as likely to attend as men, hence repeating the main gender effect, however significant gender differences are found in the other two age categories. For the middle age group, the odds of attending for a woman significantly increases, hence for this age category women are more likely to attend, whilst for the youngest age group men are more likely to attend.

Although the level of spoken Gaelic was found to have a significant impact, it was also found that this was not consistent across the age categories. Whilst the main spoken Gaelic effect is repeated in all three age categories, the gap between Gaelic speakers and English speakers reduces as people get older. In the youngest age

category for example, fluent Gaelic speakers are almost twice as likely to attend than English speakers, however this reduces and for the oldest group there is far more of a balance.

The three-way interaction shows that amongst the fluent Gaelic speaking community, only in the middle aged category are women more likely to attend than men – in this case strongly so, by a factor of almost 0.50 Amongst older and younger people, fluent males are significantly more likely to attend than fluent females. Amongst the English speaking community however, women are slightly more likely to attend in the case of younger and middle aged people, and considerably more likely to attend in the case of older people.

6.3.2. Gaelic musical events in Pubs/Clubs

The likelihood of attending Gaelic musical events in pubs/clubs is shown in Table 6-5.

Table 6-5 General and Interactive Logit Models for Pubs/Clubs attendance

Table 6-5a: General Logit Model			
Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-0.0732	1.3010	0.93
Main Effects Location(1)	-0.1524	-2.7088	0.86
Model: $Log\Omega_{lm} = \Omega + +\Omega_l^L$	Statistics:	$\Omega^2 = 3.5974$, $df = 2$, $p = 0.166$	
*Table 6-5b**: Interactive Logit Model***			
Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-0.0797	-1.4868	0.92
Main Effects			
Gender(1)	0.1793	3.3443	1.20
Age(1)	0.4626	5.9864	1.59
Age(2)	0.1616	2.1817	1.18
Spoken Gaelic(1)	0.1594	2.8704	1.17
Two-way Interactions			
Gender(1) x Age(1)	0.1175	1.4979	1.12
Gender(1) x Age(2)	-0.1235	-1.6672	0.88
Gender(1) x Spoken Gaelic(1)	0.0400	0.7450	1.04
Age(1) x Spoken Gaelic(1)	0.0782	1.0115	1.08
Age(2) x Spoken Gaelic(1)	-0.0069	-0.0938	0.99
Three-way Interactions			
Gender(1) x Age(1) x Spoken Gaelic(1)	0.0086	0.1109	1.01
Gender(1) x Age(2) x Spoken Gaelic(1)	-0.1982	-2.6761	0.82
Model: *Saturated*	Statistics:	$\Omega^2 = 0.0000$, $df = 0$, $p = 1.0000$	

The statistics indicate again that the general model provides an acceptable fit. Location is again significant at the 5% level and in the same direction, thus living in an urban area again reduces the odds of attendance to a factor of 0.86 Interestingly

however, income is found to be not significant and hence dropped from the model, as the cell frequencies can be reasonably well replicated without inclusion of this effect. This finding is also robust, as incorporation of other variables in the general model, such as gender and the level of Spoken Gaelic, produced the same result. This finding appears logical, as in most cases entry to pubs and clubs is free, or at the very least only a token admission charge is administered. Furthermore, this makes for an interesting group of Gaelic art consumers, as this will include many cases of 'accidental' consumers i.e. those that attended an event but may not have specifically gone to the venue to hear the performances.

As was the case for ceilidhs, only the saturated model can acceptably reproduce the cell frequencies in the interactive model, as all variables and interactions were found to be significant. Of the main effects, gender is found to be significant, with men more likely to attend than women by a factor of 1.5 (equivalent to a factor of 1.20 compared to the average). There are also significant differences between age groups, with the young most likely to attend and the oldest group the least likely to attend. Finally, again the level of spoken Gaelic is found to be significant, with fluent speakers more likely to attend. This offers interesting comparisons with the ceilidh model, as this activity is most likely to be consumed by young males, whilst for the former it was the middle age group woman. The profile of younger males predominating in a pub/ club situation is however a well known one, irrespective of linguistic or cultural background (Office of National Statistics 2001:p33)

Table 6-6 Odds Ratios from Table 6-5b. (Clubs/ Pubs)

Gender/Age Odds Ratios

	Younger	M.Aged	Older
Male	1.9734	1.1477	0.5953
Female	1.0898	1.0263	0.4110
Odds Ratios	1.81	1.12	1.45

Gender/Spoken Gaelic Odds Ratios

	Fluent Gaelic	English Speakers
Male	1.3484	0.9051
Female	0.8697	0.6849
	1.55	1.32

Spoken Gaelic/Age Odds Ratios

	Younger	M.Aged	Older
Fluent	1.8597	1.2640	0.5402
English	1.1564	0.9319	0.4529
	1.61	1.36	1.19

Gender/Age/Spoken Gaelic Odds Ratios

Fluent Gaelic

	Younger	M.Aged	Older
Male	2.6269	1.1411	0.8180
Female	1.3166	1.4002	0.3568
Odds ratio	2.00	0.81	2.29

English Speaker

	Younger	M.Aged	Older
Male	1.388	1.154	0.433
Female	0.963	0.752	0.473
Odds ratio	1.44	1.53	0.92

The gender/age interaction shows that in all age groups men are more likely to attend, however the most marked differences occur in the youngest age group. In this category men are almost twice as likely to attend, whilst the middle age group is the most gender balanced. This finding also further develops the idea that this group may include many 'accidental' consumers, as these results meet with priors regarding the typical pub clientele. The second interaction, between the level of spoken Gaelic and gender, although not significant, is reported as it suggests that gender differences are most marked in the fluent speakers group, and in particular, more so than for concerts/ceilidhs.

The spoken Gaelic/age interaction shows the same pattern as for ceilidhs, with the greatest difference between fluent and English speakers occurring in the youngest age group and most similarities in the oldest. The three way interaction between

gender, age and the level of spoken Gaelic also shows a similar pattern for concerts/ceilidhs, although the differences are of a stronger order – with fluent males even more likely to attend than was the case with concerts/ ceilidhs, and English speaking males more likely to attend than English speaking females, except in the oldest category. Again this fits in with priors regarding gender characteristics of pub/ club clientele.

Overall, the results from analysis of attendance at pubs/clubs shows many similarities with concerts/ceilidhs, and generally the pattern of consumption is very similar with the notable exception that gender differences were found to be more significant.

6.3.3. Choirs

Table 6-7 presents the results from estimation of the Choirs logit models

Table 6-7 General and Interactive Logit Models for Choirs

Table 6-7a: General Logit Model

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-1.2636	-17.9451	0.28
Main Effects			
Location(1)	-0.1297	-1.8606	0.88
Income(1)	-0.1156	-1.6983	0.89
Model: $\text{Log}\square_{lm} = \square + \square_l^L + \square_m^Y$	Statistics:	$\square^2 = 0.7103$, $df = 1$, $p = 0.399$	

*Table 6-7b: **Interactive Logit Model***

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-1.1956	-19.2384	0.30
Main Effects			
Gender(1)	-0.1952	-3.1409	0.82
Spoken Gaelic(1)	0.1402	2.2565	1.15
Two-way Interaction			
Gender(1) x Spoken Gaelic(1)	0.1649	2.6529	1.18
Model: $\text{Log}\square_{ijk} = \square + \square_i^G + \square_k^S + \square_{ik}^{GS}$	Statistics:	$\square^2 = 2.4796$, $df = 8$, $p = 0.963$	

For the general model, both location and income are found to be significant, although only at the 10% level. Their inclusion however does improve the overall goodness of fit statistics, which produce a sufficiently low deviation from the actual values to constitute an acceptable fit. As before, living in an urban location and being on a lower income are found to reduce the odds of attendance. This would thus appear to

be an activity undertaken by those on higher incomes, although the split is modelled only at around 53/47 probability high to low incomes.

Examining the interactive model, the most notable finding is that this is the first case in which the saturated model has not been estimated. Age can be completed removed from the model and found to make no significant difference to the fit. Age is therefore not a factor in attendance at choirs, and this is found to be consistent across categories of gender and the level of spoken Gaelic. This is an activity therefore that is undertaken by a mix of all three age groups.

Examining the two significant effects, women are more likely to attend and those with a higher level of spoken Gaelic are more likely to attend. What is interesting however is the relative low impact of the language variable given that this is a participative requirement. The parameter estimate suggests that being fluent in Gaelic only increases the odds of attendance/participation by around one sixth. This is broadly in line with the findings from the first two models relating to ceilidhs/concerts and pubs/clubs, (but less than that for activities such as poetry, theatre etc, where the language element is likely to be of more importance for enjoyment/ involvement.) This may suggest that most people attend rather than participate. The interaction effect is also found to be significant and the Odds Ratio is presented in Table 6-8:

Table 6-8 Odds Ratios from Table 6-7b (Choirs)

Gender/Spoken Gaelic Odds Ratios		
	Fluent Gaelic	English Speaker
Male	0.3377	0.1834
Female	0.3588	0.3769
Odds Ratios	0.94	0.49

Table 6-8 shows quite radical differences in the gender profile of attendees/participants of choirs between fluent Gaelic speakers and English speakers. For fluent Gaelic speakers, and hence obviously singing in Gaelic, it is a

relatively gender neutral activity, with women more likely to attend, but the difference is marginal. With those that speak English however, women are twice as likely to attend than men. Concentrating on the participative element, this may reflect the strong tradition in Gaelic singing, in that it is an activity undertaken by both genders, whilst for English speakers it is mainly, but far from exclusively, undertaken by women. Equally however, this could be considered to be the difference between participants and attendees.

6.3.4. Traditional Dance (Highland/ Hebridean/ Ceilidh Dancing)

The likelihood of attending Traditional Dance is shown in Table 6-9.

Table 6-9 General and Interactive Logit Models for Traditional Dance

*Table 6-9a: **General Logit Model***

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-0.049	-.44572	0.975
Main Effects			
Location(1)	-0.164	-2.94	0.84
Income (1)	-0.168	-3.09	0.84
Model:	Statistics: $\chi^2 = 1.81503$, $df = 1$, $p = 0.178$		

Table 6-9b: Interactive Logit Model

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-0.0380	-0.72	0.96
Main Effects			
Gender(1)	-0.0578	-1.10	0.94
Age(1)	0.1828	2.43	1.20
Age(2)	0.3912	5.36	1.48
Spoken Gaelic(1)	0.0178	0.34	1.02
Two-way Interactions			
Gender(1) x Age(1)	-0.0012	-0.01	1.00
Gender(1) x Age(2)	-0.1280	-1.75	0.88
Gender(1) x Spoken Gaelic(1)	-0.0384	-0.73	0.96
Age(1) x Spoken Gaelic(1)	0.0980	1.31	1.10
Age(2) x Spoken Gaelic(1)	-0.0334	-0.45	0.97
Three-way Interactions			
Gender(1) x Age(1) x Spoken Gaelic(1)	0.0616	0.82	1.06
Gender(1) x Age(2) x Spoken Gaelic(1)	-0.1924	-2.63	0.82
Model: *Saturated*	Statistics: $\chi^2 = 0.0000$, $df = 0$, $p = 1.0000$		

The intercept term is found to be not significant, suggesting that respondents on the whole are just as likely to attend as not attend. It is still included in the model

however, to provide compatibility with and to allow direct comparisons to be made with other logit models. The statistics indicate that location and income are once again significant at the 5% level with living in an urban setting and being on a low income both equally likely to discourage attendance by a factor of around one sixth.

With regard to the interactive model, only the saturated model can acceptably reproduce the cell frequencies, as the inclusion of the three way interaction item is necessary to allow a reasonable fit. Of the main effects, gender is not found to be significant, hence women are as likely to attend as men. However age has a highly significant effect. The model suggests that the youngest age category are almost 1.20 times more likely to attend than the sample average with the biggest impact being in the middle age group - whose attendance is 1.48 times more likely than the sample average (similar to concerts and ceilidhs). Consequently there is massive under representation in the oldest age group, with attendance less likely to a factor of 0.56.[1] There is therefore a clear division between the over and under 50s in regard to attendance/ participation in this activity, which perhaps reflects the participative nature of Traditional Dance - more suited to the younger and middle aged groups. In addition it may be the case that given the prominence of children (pre-teen/ teen) active within Highland and Hebridean dancing, it could be expected that respondents within the youngest and middle age group would be likely to have children of that age, and thus attend to observe such activities. In addition, a religious factor may be at work here, with older individuals tending to be more influenced by religion, and in the context of outer Hebridean Presbyterianism influenced against dance.

Interestingly this is the first activity in which language proficiency is not seen to have a significant effect, making attendance a language neutral activity. This may suggest that of all the events examined so far, this may be the most Anglicised overall. Unfortunately the aggregation of the data within this live event precludes analysis of the various sub sections amongst Traditional Dance - Highland, Hebridean and Ceilidh Dancing.

[1] Although not directly indicated within the model, this can be calculated by the exponential of (1- the sum of the parameter estimates) for the youngest and middle aged group.

Table 6-10 Odds Ratios from Table 6-9b (Traditional Dance)

Gender/Age Odds Ratios			
	Younger	M.Aged	Older
Male	1.0894	0.6658	1.5290
Female	1.2261	0.9655	1.3253
Odds Ratios	0.89	0.69	1.15
Gender/Age/Spoken Gaelic Odds Ratios			
Fluent Gaelic			
	Younger	M.Aged	Older
Male	1.2530	0.5203	1.5987
Female	1.3465	1.1975	1.1523
Odds ratios	0.93	0.43	1.39
English Speakers			
	Younger	M.Aged	Older
Male	0.947	0.852	1.462
Female	1.117	0.779	1.524
Odds Ratios	0.85	1.09	0.96

The gender/ age interaction can be seen to impact differentially over the age categories, with middle aged males less likely to attend by a factor of 0.69 while for the younger category, the odds ratio of males attending is slightly higher at 0.89. In the oldest age range however, males are more likely to attend, by a factor of 1.15. Again, given the aggregated nature of this data - three differing dance styles being incorporated - several trends may lie behind the operation of these effects, making unambiguous interpretation of the data difficult.

The three way interactions between Gender, Age and Spoken Gaelic builds upon the 2 way impact and is found to be significant in this model, with interesting differences appearing in the middle aged and older groups of fluent speakers. Here it can be seen that middle aged males are less likely to attend than females by a factor of 0.43, whilst amongst the older group, men are more likely to attend by a factor of 1.39. This may reflect the fact that fluent middle aged men are more likely to attend events in pubs/ clubs, and also that given the popularity of younger children taking part in Highland and Hebridean dancing, mothers are more likely than fathers to attend and spectate

with their children. There may also be a preponderance of fluent middle aged female participants in Ceilidh dancing - the third element of traditional dance - due to women finding the environment of Ceilidh dancing a safe environment to attend alone, or with female friends.

This difference is not replicated however, amongst the English speaking community where little significant difference between genders is noticeable. It may be possible that the attendance by English speakers reflects a more social approach to traditional dance - couples attending Ceilidh dances together whilst fewer of their children attend Highland or Hebridean dance - and thus the female parental effect is not there to be captured.

6.3.5. Exhibitions/ interpretive projects / local history, wholly or partly in the medium of Gaelic:

The likelihood of attending exhibitions / interpretive projects etc is shown in Table 6-11

Table 6-11 General and Interactive Logit Models for Exhibitions/ interpretive projects etc

Table 6-11a: General Logit Model

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-0.2436	-4.38	0.78
Main Effects			
Income (1)	-0.3090	-5.56	0.73
Model: $Log\square_{lm} = \square + \square^{Y}_{m}$	Statistics:	$\square^2 = .59041, df = 2, p = 0.744$	

*Table 6-11b**: Interactive Logit Model***

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-0.2430	-4.70	0.78
Main Effects			
Gender(1)	-0.0658	-1.27	0.94
Age(1)	-0.0098	-0.12	0.99
Age(2)	0.1948	2.72	1.22
Spoken Gaelic(1)	0.0960	1.85	1.10
Two-way Interactions			
Gender(1) x Age(1)	0.0198	0.26	1.02
Gender(1) x Age(2)	-0.0092	-0.12	0.99
Gender(1) x Spoken Gaelic(1)	-0.0546	-1.05	0.95
Age(1) x Spoken Gaelic(1)	-0.0274	-0.36	0.97
Age(2) x Spoken Gaelic(1)	-0.0038	-0.05	1.00
Three-way Interactions			
Gender(1) x Age(1) x Spoken Gaelic(1)	-0.1064	-1.41	0.90
Gender(1) x Age(2) x Spoken Gaelic(1)	-0.0812	-1.13	0.92
Model: *Saturated*	Statistics:	$\square^2 = 0.0000, df = 0, p = 1.0000$	

Exhibitions/ Interpretive projects deal with aspects of Gaelic history or life and are often linked with the oral history movement *Comuinn Eachdraidh*

Entry will normally range from free to a nominal price such as £1. Nevertheless, income is still found to be a significant factor, with those on less than the median income less likely to attend by a factor of 0.73. This may suggest that the income variable is picking up a social class effect rather than income per se. This may therefore indicate that this is a middle class activity, with those on above median income almost 1.75 times more likely to attend than those on below median incomes. Interestingly, location was not found to be a factor, possibly suggesting that such exhibitions or interpretative projects are just as likely to be found in rural locations as urban settings. More likely, however is the suggestion that travel is not a barrier to attendance at such events, particularly for those living in a rural setting, who can be expected to have a deeper connection to the Gaelic culture(MacKinnon 1994; 1997). This is also consistent with the income finding which would suggest that individuals are unlikely to be dependant upon public transport.

Once more only a saturated model could successfully reproduce the cell frequencies within the interactive model, with all variables and interactions significant. Of the main effects age was found to be significant at the 5% level, and spoken Gaelic at the 10% confidence level.

Thus those in the middle aged category were more likely to attend by a factor of 1.22, whilst fluent speakers were more likely to attend by a factor of 1.10 - the small odds in favour of fluent Gaelic speakers perhaps reflecting the fact that almost all exhibitions/ interpretive projects etc are bi-lingual, removing perceived barriers to attendance by English speakers.

Table 6-12 Odds Ratios from Table 6-11b (Exhibitions/ interpretive projects etc)

Gender/ Age/ Spoken Gaelic Odds Ratios			
Fluent Gaelic			
	Younger	M.Aged	Older
Male	0.6764	0.8464	0.7832
Female	1.0232	1.2901	0.6993
Odds Ratios	0.66	0.66	1.12
English Speaker			
	Younger	M.Aged	Older
Male	0.814	0.923	0.465
Female	0.646	0.817	0.707
Odds Ratios	1.26	1.13	0.66

Within the interactive model, none of the two way interactions were found to be significant. However the three way interaction of gender/ age and spoken Gaelic was found to be so, with resultant odds shown in Table 6-12.

As can be seen, the gender/ spoken Gaelic effect impacts differentially over age, with fluent males only 0.66 as likely to attend as fluent females in both the younger and middle aged category. In the older category however, the direction is reversed with fluent men 1.12 times more likely to attend than fluent women. These figures may represent several trends. Within Gaelic Scotland, the tradition of oral history/ story telling had normally been seen as a male preserve, although women tended to be the depositories of genealogical knowledge. The odds of 1.12 for older fluent male attendance may represent the remains of what is now a declining tradition, whereas in the other two age groups the predominance of fluent women may represent the domestic division of labour, with women supplementing their childrens' knowledge of Gaelic related issues/ history by taking them to such establishments.

Within the English speaking community however, the odds of men attending progressively diminish with age, from a peak of 1.26, for the youngest group, down to odds of only 0.66 in the oldest age group. Here, unlike their Gaelic speaking counterparts, English speaking women in the parenting age groups (the younger and

middle aged category) may not feel the need to supplement their children's education with such Gaelic related activities/ materials, thus the lack of women predominating in these age ranges. The decline over age in English speaking male attendance may also reflect a diminishing willingness amongst English speaking males to contend with/ interact with non English-language culture and history as they grow older.

6.3.6. Plays/Theatres/ panto in the medium, or partly in the medium of Gaelic

The likelihood of attending plays/Theatres/ panto in the medium, or partly in the medium, of Gaelic is shown in **Table 6-13**

Table 6-13 General and Interactive Logit Models for Plays/ Theatre/ panto

Table 6-13*a: General Logit Model*

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-1.0446	-16.54	0.35
Main Effects			
Income (1)	-.1748	-2.76	0.83
Model: $Log\Omega_{lm} = \Omega + \Omega^{Y}_{m}$	Statistics:	Ω^{2} *=.474665, df =2, p = 0 .093*	

Table 6-13*b: Interactive Logit Model*

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	--1.0734	-17.67	0.34
Main Effects			
Gender(1)	-0.2140	-3.52	0.81
Age(1)	-0.1559	-1.76	0.86
Age(2)	0.4406	5.44	1.55
Spoken Gaelic(1)	0.2406	3.96	1.27
Two-way Interactions			
Gender(1) x Age(1)	0.0242	0.27	1.02
Gender(1) x Age(2)	-0.0958	-1.18	0.91
Gender(1) x Spoken Gaelic(1)	-0.0268	-0.43	0.97
Age(1) x Spoken Gaelic(1)	0.0746	0.84	1.08
Age(2) x Spoken Gaelic(1)	0.0316	0.39	1.03
Three-way Interactions			
Gender(1) x Age(1) x Spoken Gaelic(1)	-0.0461	-0.52	0.95
Gender(1) x Age(2) x Spoken Gaelic(1)	-0.1501	-1.8	0.86
Model: *Saturated*	Statistics:	Ω^{2} *= 0.0000, df =0, p = 1.0000*	

While the intercept indicates that attendance at plays/ theatres is a minority pursuit – the population not tending to engage in this (odds of attendance 0.35), unsurprisingly income is found to be a significant factor, with low income individuals less likely to attend by a factor of 0.83. Given that social class may influence attendance at theatre, this result may actually be a combination of lower income and social class - if

individuals have restrictive incomes they may not choose to spend it on activities such as theatre going. . Interestingly (see exhibitions above), location is again not found to be a factor and is thus dropped from the model. This may be explained by the fact that most of the Gaelic medium plays and theatrical events are put on by companies such as *TOSG* - who have a remit to tour widely around the Gaelic speaking areas, plus the fact that travelling to events is a fact of life for those in rural areas. This may represent the lifestyle and social class of theatre goers, where mobility is rarely a major problem.

In the interactive model, the main effects are significant and tend to mirror some of the factors of non Gaelic plays and theatre – women more likely to attend than men, young people less likely to attend, and the middle aged more likely. Understandably fluency in Gaelic would be a factor, with fluent speakers more likely to attend by a factor of 1.27 compared to the sample average. This is equivalent to a factor of 1.6 fluent speakers to non fluent speakers - quite a large difference. Although at first sight it might be expected that the ratio of Gaelic speakers to non Gaelic speakers might be even higher, the question related to plays and theatre either in Gaelic or *only partly* in the medium of Gaelic. In addition, contemporary Gaelic theatre - even when fully in the medium of Gaelic, can be expected to have copious bi-lingual material produced to accompany the piece itself, and from this to be understandable cross culturally and to those with only a smattering of Gaelic. They also very often deal with events of local or historical significance which attract an audience wider than solely fluent Gaelic speakers. In the interactive model, none of the two way interactions were found to be significant, although the 3 way interaction of Gender/ Age and Spoken Gaelic was found to be significant at 10% and thus is presented in table 6 -14

Table 6-14 Odds Ratios from Table 6-13b Plays/ Theatre)

Gender/ Age/ Spoken Gaelic Odds Ratios			
Fluent Gaelic			
	Younger	M.Aged	Older
Male	0.3083	0.4286	0.3023
Female	0.5213	1.1341	0.2863
Odds Ratios	0.59	0.38	1.06
English Speakers			
	Younger	M.Aged	Older
Male	0.190	0.354	0.164
Female	0.240	0.462	0.307
Odds Ratios	0.79	0.77	0.54

The three way interactions indicate that gender and fluency impact differentially over age. Amongst the fluent speakers attending, a similar pattern emerges to that of traditional dance, with women predominating in the first age category, and again markedly so in the middle aged category. Within the older age range fluent men are more likely to attend than fluent women by a factor of 1.06. Within the English speaking category, again gender impacts differently over age, with women increasingly predominating as the age category of the respondent increases. This may possibly represent a social networking factor, English speaking women more likely to attend theatres/ plays than their male counterpart, possibly because of the safe nature of such attendance.

6.3.7. Poetry/ Story telling in the medium of Gaelic

Even more than Plays/ Theatre/ Panto, the intercept indicates the minority nature of this pursuit with the likelihood of attendance only 0.15. As with exhibitions and plays, location was not found to be significant, whereas income was. Those on lower income were found less likely to attend by a factor of 0.83. Again this may represent a social class factor in the common profile of the typical consumer of poetry/ oral literature independent of language or cultural background. Within the interactive

model, only Gaelic fluency was found to be a factor, with fluent speakers more likely to attend by a factor of 1.26 - a similar factor to that found in relation to theatre (and Psalm singing - see below).

Table 6-15 General and Interactive Logit Models for Poetry/ Story telling

Table 6-15a: General Logit Model			
Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-1.8908	-22.60	0.15
Main Effects Income (1)	-.18102	-2.76	0.83
Model: $Log\Omega_{lm} = \Omega + \Omega^{Y}_{m}$	Statistics: Ω^{2} *=3.674365, df =2, p = 0 .159*		
Table 6-15b: ***Interactive Logit Model***			
Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-1.874	-24.84	0.15
Main Effects Spoken Gaelic(1)	0.2286	3.03	1.26
Model: $Log\Omega_{cjk} = \Omega + +\Omega^{S}_{l}$	Statistics: Ω^{2} *= 9.3600, df =10, p = 0.499*		

6.3.8. Psalm Singing

Psalm singing is a particularly Gaelic form of worship, unaccompanied by musical instrument, and is representative of sections of the protestant community, mostly in the northern islands of the Outer Hebrides. The relatively high intercept term reflects a strong religious culture within the sample area.

In the general model, location was not found to be a factor (similar to the case with exhibitions/ oral history/poetry/ plays/theatre), and neither was income. However, the latter was included as its inclusion helped the general fit. The income parameter

suggests that psalm singing is more likely to be undertaken by those on higher incomes, however the effects are marginal.

Table 6-16 General and Interactive Logit Models for Psalm singing

Table 6-16a: General Logit Model			
Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-.40656	-7.25	0.66
Main Effects			
Income (1)	-.07748	-1.38	0.92
Model: $Log\square_{lm} = \square + \square_m^Y$	Statistics: $\square^2 = .0.06999$, $df = 2$, $p = 0.966$		
Table 6-16b: Interactive Logit Model			
Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-0.35788	-6.69	0.70
Main Effects			
Gender(1)	-0.1141	-2.16	0.89
Age(1)	-0.1407	-1.83	0.87
Age(2)	-0.0287	-0.38	0.97
Spoken Gaelic(1)	0.2406	3.96	1.27
Two-way Interactions			
Gender(1) x Age(1)	0.0242	0.27	1.02
Gender(1) x Age(2)	-0.0956	-1.18	0.91
Gender(1) x Spoken Gaelic(1)	0.6194	11.62	1.86
Age(1) x Spoken Gaelic(1)	-0.1775	-2.31	0.84
Age(2) x Spoken Gaelic(1)	0.0703	0.94	1.07
Model: *Unsaturated*	Statistics: $\square^2 = 2.18161$, $df = 5$, $p = 0.823$		

While the gender main effect suggests that women are more likely to attend than men, the interactive model suggests that amongst the fluent Gaelic speakers attending, men are much more likely to take part than women. This is illustrated in the two way interactions, and in all likelihood can be explained by the male oriented

– but often taught by women (sgoil fhon) - nature of Psalm singing itself, where those leading the singing (the 'precentors') are male only (as are the church elders), whereas women are confined to membership of the congregation. The odds are shown in table 16, indicating that fluent males are 2.75 times more likely to attend than fluent females. Within the church congregation drawn from the English speaking community however, women are more likely to attend than men, in line with the main gender effect (although much more pronounced). Although with regard to language it might be assumed that the Gaelic nature of the activity would suggest a higher odds in favour of fluent Gaelic attendance than 1.27, it has to be borne in mind that this figure is against the sample average. Compared to non-Gaelic speakers, Gaelic speakers are more likely to attend by a factor of 1.51. The question of piety or religious affiliation is not reducible to linguistic factors of course, making the interpretation of these figures rather complex. It can be noted in addition that day to day evidence also suggests affiliation to the church has a social/ community element attached to it, which is wider than linguistic solidarity or communality alone, - all of which may help explain why this figure is not still higher.

Table 6-17 Odds Ratios from Table 6-16b (Psalm singing)

Gender/ Spoken Gaelic Odds Ratios		
	Fluent Gaelic	English Speakers
Male	1.4741	0,2640
Female	0.5366	1.1446
	2.75	0.23

Age/ Spoken Gaelic Odds Ratios			
	Younger	M.Aged	Older
Fluent	0.6469	0.9271	1.1728
English	0.5703	0.4978	0.5850
	1.13	1.86	2.00

Within the interactive model, the two way interactions between Age and Spoken Gaelic are also significant and shown in Table 6-17. This indicates that although in every age range fluent speakers are more likely to attend than English speakers, this main effect impacts differentially over each age group, with the ratio of fluent to non

fluent speakers increasing markedly with age. Again, this may reflect higher levels of piety in the older members of the Gaelic speaking community, compared to similar age ranges in the English speaking community

6.4. Purchases of Gaelic Artistic and Cultural Goods

6.4.1. Purchase of CDs/ tapes/ records of songs sung in Gaelic or containing songs or psalms sung in Gaelic

Together with attendance at Ceilidhs/ concerts, the purchase of Gaelic CDs/ tapes etc is an activity which the respondent population is more likely than not to take part in, with the intercept term suggesting that the ratio of consumption to non-consumption is likely to be in the order of a factor of two . Given the widely reported resurgence of Gaelic Arts and Culture (Bryden and MacKinnon 1993; Johnston 1994)- often seen as spearheaded by groups such as Capercaillie and Runrig, together with the fact that music can be enjoyed without the need for deep linguistic ability, this result is unsurprising.

In the general model, location is significant at the 5% level, with results indicating that those living in urban areas are less likely to consume such Gaelic goods - with odds of consumption being 0.83 of the sample average - or about 0.7 of those living in rural areas. Again this shows a strong link between rurality and identification with the Gaelic culture. Income is also found to be a significant factor at the 10% level, suggesting that those below median income had odds of purchasing such goods at 0.90 of the level of the sample average (approximately 0.8 of those on incomes above the median).

Table 6-18 General and Interactive Logit Models for CD purchase

Table 6-18a: General Logit Model

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	0.36448	6.81	1.43
Main Effects			
Location (1)	-0.1844	-3.44	0.83
Income (1)	-0.0957	-1.81	0.90
Model: $Log\lambda_{lm} = \lambda + \lambda_l^L + \lambda_m^Y$	Statistics: $\chi^2 = .0.25738$, $df = 1$, $p = 0.612$		

Table 6-18b: Interactive Logit Model

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	0.4190	8.24	1.52
Main Effects			
Gender(1)	-0.0915	-1.85	0.91
Age(1)	-0.3513	-4.75	0.70
Age(2)	0.1381	1.93	1.15
Spoken Gaelic(1)	0.4343	8.55	1.54
Two-way Interactions			
Gender(1) x Age(1)	-0.1198	-1.62	0.89
Gender(1) x Age(2)	-0.0177	-0.24	0.98
Model: *Unsaturated*	Statistics: $\chi^2 = 6.2157$, $df = 5$, $p = 0.286$		

Within the interactive model, all main effects are significant. Males are found to be only 0.91 as likely to purchase as females, whereas younger people are also less likely to consume - only 0.70 against the sample population. This is not surprising however given the advertising and other resources at the service of mainstream English language commercial music, and the well known effect of peer pressure and wish to conform in terms of fashion within this age group. However, amongst the 35 to 50 age group, people are more likely than not to purchase Gaelic medium CDs and tapes, by

a factor of 1.15, which may conform to the observation of a 'return' to Gaelic arts and Gaelic identification widely reported amongst this age group (MacKinnon 1990; MacKinnon 1997), together with the increased likelihood of purchasing such products with a religious content. Amongst the main effects it is fluency of spoken Gaelic which has the main impact, increasing the odds of consumption by fluent Gaelic speakers to 1.54 compared to non Gaelic speakers. Putting these results together would suggest that in the main the types of CDs being considered are not of the Runrig/ Capercaillie variety.

Relating these results to those found with Concerts/ Ceilidhs and Musical Events in Clubs Pubs, some interesting differences arise in main effects. The spoken Gaelic main effect is far more pronounced in the case of Gaelic CDs/ tapes etc than is the case for the two live events in question. This may indicate that the social nature of the two live events can compensate for lower level of language fluency.

Another difference may be noted in the fact that while the age main effect indicates CD/ tape/ record purchase is most likely in the middle age group, (as is the case with attendance at Concerts/ Ceilidhs), this differs from results for musical events in Clubs/ Pubs, where the youngest age group predominated. This may again reflect the age characteristics of pub goers in general.

Table 6-19 Odds Ratios from Table 6-18b (CD purchase)

Gender/Age Odds Ratios			
Male	0.8662	1.5651	1.9702
Female	1.3219	1.9474	1.7973
Odds ratio	0.66	0.80	1.10

Within the two way interactions, the gender main effect operates differentially over the age categories with young males less likely to consume such goods, by a factor of 0.66. As the age category increases the likelihood of men buying such products increases progressively. This differs with the case of both Ceilidhs/ Concerts and musical events in Clubs/ Pubs, where in both cases men predominate in consumption in the youngest age group, men are less likely to consume in the middle

age group, and then more likely in the older group (although the odds are always greatest in the youngest age group).

6.4.2. Children's Books purchase

With the rise of Gaelic Medium Education, many children in the geographical area concerned are given access to Gaelic learning materials including books. During the period of this survey there were 145 pre-school units and 50 Gaelic medium primary school units in operation, where children on pre-primary and primary age received some instruction in the Gaelic language.

Given the age range of the survey sample (minimum age 18), those who purchase Children's books may be presumed to purchase them on behalf of their own children or those of friends/ relatives.

Table 6-20 shows the likelihood of childrens' books purchase.

Table 6-20 General and Interactive Logit Models for Children's Book Purchase

Table 6-20a: General Logit Model

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-1.2582	-18.17	0.26
Main Effects			
Location (1)	-0.1800	-2.63	0.83
Income (1)	-0.1625	-2.44	0.84
Model: $Log\Omega_{lm} = \Omega + \Omega_l^L + \Omega_m^Y$	Statistics: $\chi^2 = 0.24353$, $df = 1$, $p = 0.622$		

Table 6-20b: Interactive Logit Model

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-1.2747	-19.46	0.28
Main Effects			
Gender(1)	-0.2184	-3.34	0.80
Age(1)	0.1495	1.62	1.16
Age(2)	0.4854	5.7	1.62
Spoken Gaelic(1)	0.3850	6.15	1.47
Two-way Interactions			
Gender(1) x Age(1)	-0.1636	-1.79	0.85
Gender(1) x Age(2)	0.0619	0.72	1.06
Model:	Statistics: $\chi^2 = 4.0510$, $df = 5$, $p = 0.542$		

The intercept indicates that most of the sample population do not buy such books (odds being only 0.26 in favour of purchase) This would fit in with the limited size of the population with children[2] as indicated above. It may also be indicative of the limited number of Children's Books available in the Gaelic language.[3]

[2] Of the 2028 respondents, 741 (39%) stated that there were currently children of school age, or younger in their household.

[3] According to the Gaelic Book Council's catalogue of 1997, books specifically for children numbered slightly under 160, out of an approximate total of 400 books available

Examining the general model, again location and income are found to be significant at the 5% level, indicating that those in an urban location are only 0.83 as likely to buy such books as the sample average (odds of approximately 0.7 against those living in a rural area). with similar odds operating for those on below median earnings, compared to those earning above the median. Again these results for location are very similar to those operating in relation to the general findings of the study, whilst the results for income are similar to those for concerts/ ceilidhs; choirs; traditional dance and plays;

In the interactive model, all main effects are found to be significant. Gender is significant at the 5% level, with odds of males purchasing Children's' books only 0.80 of those of the sample population. This result confirms similar well documented characteristics regarding gender based responsibilities related to children.(Gray, Lovejoy et al. 1990; Crosky and Jaskar 1993)

With regard to age, those aged 35 or younger are 1.16 more likely to purchase such books - compared to the sample average, with those within the middle age group, even more likely to purchase - at a factor of 1.62 against the sample average again within what might be the generally expected picture.

Again unsurprisingly, fluent Gaelic speakers are 1.47 times more likely to purchase such books than the sample average, an understandable result given the need in most cases for parental involvement in childrens' reading and the advantage which fluent Gaelic speakers would have over non fluent speakers in this regard. Evidence also suggests however (Baker 1996) that in many instances non fluent parents encourage their younger children to learn Gaelic given the perceived benefits of bi-lingualism.

Table 6-21 Odds Ratios from Table 6-20b (Children's Books)

Gender/Age Odds Ratio			
Male	0.2215	0.3884	0.1318
Female	0.3928	0.4387	0.1375
Odds ratio	0.56	0.89	0.96

Within this model the two way interaction between gender and age is found to be significant at the 10% level, with men less likely to purchase books than women at all age ranges - again in line with generally understood figures regarding purchases for the younger generation. This effect however impacts differently over age - the difference between men and women reducing with age. This may represent a trend of greater commitment to the language and culture, as age category increases.

6.4.3. The Purchase of (non-childrens) books in Gaelic

The likelihood of purchase of non children's Gaelic books is shown in Table 6-22

Table 6-22 General and Interactive Logit Models for Gaelic Book purchase

Table 6-22a: General Logit Model

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-1.0094	-15.90	0.36
Main Effects			
Location (1)	-0.1390	-2.19	0.87
Model: $Log\Omega_{lm} = \Omega + \Omega_l^1$	Statistics: $\Omega^2 = 1.17909$, $df = 2$, $p = 0.408$		

*Table 6-22b: **Interactive Logit Model***

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-0.9506	-16.38	0.39
Main Effects			
Age(1)	-0.1407	-1.83	0.74
Age(2)	-0.0287	-0.38	1.08
Spoken Gaelic(1)	0.2406	3.96	1.57
Model: *Unsaturated*	Statistics: $\Omega^2 = 9.43038$, $df = 8$, $p = 0.307$		

Although this model indicates that a minority of the sample population purchase Gaelic books, the odds are higher (0.36), than is the case with Gaelic children's books (0.26) - a result to be expected given the relatively smaller sub group of book purchasers who will have children.[4]

Like the childrens book model, location is a factor, with those living in an urban environment less likely to buy Gaelic books than those living in a rural environment (a factor of 0.87). In this model however, income is dropped as a factor, the purchasing of Gaelic books being an activity which is as likely to be carried out by

[4] In addition the number of books for adults available is higher than childrens – although still very limited (approximately 250 in the period under study)

those on low incomes as those on higher incomes. This may suggest that for those who buy Gaelic arts and cultural products, books are seen as more essential (i.e. irrespective of income) than some other goods, such as childrens' books or Gaelic medium CDs etc. It should be noted however, that in the case of comparison with CDs/ tapes etc, price may be a factor, books being less expensive. This would not be the case in comparison with childrens books which in general show no discernible difference in price when compared to those produced for the adult market.

An interesting feature of this model is that (as in Ceilidhs), Gender is dropped as a main effect - the only purchase model in which this is the case, suggesting that Gaelic book purchase is a gender free activity - i.e. book purchase is as attractive to men as to women. Again this may be an interesting indication of the importance afforded to books within the range of Gaelic cultural goods and services although it must be noted that far more people attend live events (such as Ceilidhs/ Concerts, events in Pubs/ Clubs etc) than buy Gaelic language books.

Age is found significant at the 10% level, and the odds indicate that younger people are less likely to buy Gaelic language books than the sample in general. This may be reflective of the still markedly limited choice of Gaelic language books available which are aimed at the younger market, which may re-inforce the tendency of younger people to opt for the wider range of books in English.

As would be expected given the direct connection between language and print, it is the level of Gaelic fluency which again is key to purchase of Gaelic books, with the odds of fluent speakers purchasing such books 1.57 times those of the sample average - higher odds than are found with any other of the GLAC goods in question, and reflective of the need for fluency in order to understand the written word. The fact that the odds are not still higher possibility reflects the 'Speaking our Language[5] effect', which led to a large increase in the buying of Gaelic language materials amongst the English speaking public throughout Scotland during this period.

[5] Speaking our Language - a series of books/ tapes and videos, produced in conjunction with an STV Gaelic language learning serial, was by far the most popular of such Gaelic promotions in the media and led to an estimated 10,000 new learners within the first year of its production MacDonald, R. (1997). Gaelic renaissance versus Gaelic Preservation. A. C. Gaidhealach. Glasgow, An Comunn Gaidhealachd.

6.4.4. Sheet Music for Gaelic songs:

The likelihood of purchase of Sheet Music for Gaelic songs is indicated in Table 6-23

Table 6-23 General and Interactive Logit Models for Gaelic Sheet Music

Table 6-23a: General Logit Model

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-.2.41	-22.29	0.08
Main Effects			
Location (1)	-0.2160	-2.09	0.80
Income (1)	-0.2680	-2.63	0.76
Model: $Log\square_{lm} = \square + \square_l + \square_m$	Statistics: $\square^2 = 0.35566$, $df = 1$, $p = 0.551$		

Table 6-23b: Interactive Logit Model

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	--2.318	-23.55	0.10
Main Effects			
Gender(1)	-0.2272	-2.30	0.80
Age(1)	-0.2894	-1.88	0.75
Age(2)	0.1847	1.45	1.20
Spoken Gaelic(1)	0.2219	2.41	1.25
Two-way Interactions			
Gender(1) x Age(1)	-0.2328	-2.99	0.63
Gender(1) x Age(2)	0.2052	1.59	1.23
Gender(1) x Spoken Gaelic(1)	0.1678	1.78	1.18
Age(1) x Spoken Gaelic(1)	0.2985	2.18	1.35
Age(2) x Spoken Gaelic(1)	-0.1008	-0.83	0.90
Model: *Unsaturated*	Statistics: $\square^2 = 2.44472$, $df = 2$, $p = 0.295$		

The intercept for the main model indicates that the odds of consumption of this product is lower than that for any other good or service, or live event investigated.

This is however unsurprising, given the low incidence of sheet music purchase amongst the general public.

As is the case with the majority of models, location and income are both factors, with rurality impacting positively to a greater extent than is the case in any other model (those living in a rural area 1.25 more likely to purchase). Income also impacts to a greater extent than is the case with all other models excepting exhibitions.

For the interactive model, interestingly the main effect of gender is very close to that of gender in the Choirs live model. (0.80 to 0.82 for choirs). This may suggest that as women are more likely to attend choirs, they may also be more likely to purchase music to better allow involvement in this activity. Unlike choirs however, age does play a role as a main effect, with younger people less likely to purchase such music, whilst those in the middle age range are more likely to purchase it by a factor of 1.20. Again fluency impacts as a main effect, understandably as the ability to read and pronounce Gaelic will presumably be a factor in wishing to purchase the printed word. This may also be further confirmation of the link between choir participation and the purchase of sheet music, as musical notation is an international language.

Amongst the two way interactions, both Gender and Age, and Age and Spoken Gaelic are found to be significant, with the odds ratio shown in table 24. This is of interest given the lack of significance of age in the choirs model, choirs attendance being undertaken by a mix of all 3 age groups.

With regard to sheet music, in both categories a high degree of variation over age is noticeable. With regard to gender and age, within the youngest age group, women are 4 times as likely to purchase sheet music than men, while for the middle age and older group the odds are much more even. This may reflect the preponderance of younger women involved in the Mod, compared to the involvement of younger men.

With regard to fluency, in all age ranges the fluent are more likely to purchase sheet music, but at progressively diminishing odds. For the youngest age group they are almost 3 times more likely to do so, while for the oldest age group the odds have reduced to 1.05. It may be possible that this again reflects young Gaelic speakers' involvement in the Mod, whereas for the two other age ranges, there is less direct

incentive to purchase sheet music. Furthermore, it may again reflect the difference between singing and playing, as people become older the emphasis may move from singing to playing and hence Gaelic language proficiency becomes less of a factor.

Table 6-24 Odds Ratios from Table 6-23b (Sheet music)

Gender/Age Odds Ratios			
	Younger	M.Aged	Older
Male	0.0369	0.1159	0.1130
Female	0.1474	0.1211	0.1058
Odds ratio	0.25	0.96	1.07
Age/ Spoken Gaelic Odds Ratios			
	Younger	M.Aged	Older
Fluent	0.1241	0.1337	0.1120
English	0.0438	0.1049	0.1067
	2.83	1.27	1.05

6.4.5. Gaelic Videos

The likelihood of purchasing videos either partly or wholly in the medium of Gaelic is shown in Table 6-25

Table 6-25 General and Interactive Logit Models for Gaelic Videos

Table 6-25a: General Logit Model

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-1.0569	-16.31	0.34
Main Effects			
Location (1)	-0.1413	-2.19	0.86
Income (1)	-0.1139	-1.79	0.89
Model: $Log\Omega_{lm} = \Omega + \Omega_l^L + \Omega_m^Y$	Statistics: $\Omega^2 = .0054,\ df = 1,\ p = .941$		

*Table 6-25b**: Interactive Logit Model***

Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-1.0359	-17.63	0.35
Main Effects			
Age(1)	-0.2433	-2.77	0.78
Age(2)	0.0645	0.79	1.07
Spoken Gaelic(1)	0.3995	6.77	1.49
Model:	Statistics: $\Omega^2 = 12.302,\ df = 8,\ p = 0.138$		

The statistics indicate that the general model provides an acceptable fit. Location is significant at the 5% level and income at the 10%. Therefore living in an urban area reduces the odds of consumption to around a factor of 0.86 and low income likewise to a factor of 0.89 - both consistent in direction with the majority of other models examined.

Although a key feature of the increasing interest in Gaelic language and culture has been increasing television coverage, this has not yet translated into large scale video production. During the period of the survey the majority of the Gaelic medium videos available were either language learning tapes - such as the Speaking our language series or tapes aimed at children (Gaelic Book Council 1997)[6]. The intercept figure of 0.34 representing the likelihood of purchase in the sample as a whole, is however higher than that for childrens books (0.26) and approximates to that of general book buying (0.36)

Within the interactive model, only age and spoken Gaelic are found to be significant, gender being dropped by the model. Also of interest is that for the first time no interactions are found to be significant in the model, only main effects being found to have an impact.

The main effect of age is found to be that those in the younger age group are less likely to consume Gaelic Videos by a factor of 0.78, whilst fluent Gaelic speakers are more likely to consume by a factor of 1.49. This latter figure is in the same range of fluency as that of consumers of childrens books, and may again partially reflect similar issues such as the need for a certain level of fluency by adults to help their children use and understand media produced in the Gaelic language

6.4.6. Gaelic related artistic, craft or print products

The likelihood of consumption of Gaelic related artistic, craft or print products is shown in Table 6-26

[6] Details provided by Canan Ltd, the wholesalers of the videos in question, indicated that in the period in question, just over half of all sales were Speaking Our Language learner videos, the remainder being childrens tapes.

Table 6-26 General and Interactive Logit Models for Gaelic related artistic, craft or print products

Table 6-26:Combined Logit Model			
Parameter	**Estimate**	**Z Value**	**Odds**
Intercept	-0.4555	-14.396	0.40
Main Effects			
Income(1)	-0.2128	-3.36	0.80
Age(1)	0.0548	0.61	1.06
Age(2)	0.1639	1.91	1.18
Two-way Interactions			
Income(1) x Age(1)	-0.1072	-1.19	0.90
Income(1) x Age(2)	0.1480	1.72	1.16
Model: *Saturated*	Statistics: χ^2 = *.000000, df =0, p = 1.000*		

Unlike the other cases considered above, the adoption of a separate general and interactive model framework for the purchase of Gaelic related artistic, craft and print products, led to a very small number of variables being found significant. This being the case, it was felt more appropriate to therefore analyse a single combined model for these products, thus allowing better comprehension of the variables and interactions behind such purchases.

In considering the combined model, it can be seen that although consumption of such goods is a minority pursuit (with odds of 0.40), there is greater likelihood of such consumption than was the case with attendance/ involvement with choirs (0.28); plays/ theatre/ panto (0.35); poetry/ story telling (0.15); children's book purchase (0.26); non childrens books (0.36); and sheet music (0.08)

Considering the main effects within the model, lower income is found to impact negatively on the likelihood of purchase, with the likelihood of those on an income below the median purchasing, being reduced to around a factor of 0.80. In addition,

the likelihood of those within the middle aged bracket purchasing is found significant and positive at a factor of 1.18.

The two way interaction between income and age is also found to be significant and to act differentially over the age ranges, with the lowest likelihood of purchase by low income respondents relative to high income, being found amongst the youngest age group (odds 0.81 low to high incomes) It is amongst the middle age group that the lower income respondents are most likely to consume, relative to high income respondents in the same age range, with odds of 1.34, whilst amongst the older age group, lower income respondents are less likely to consume to a factor of 0.92. This may suggest that whilst overall there is a class or income factor operating, but when the middle age group is considered, the strength of the 'second generation/ return to Gaelic' factor mentioned above is enough to overcome the constraint of low income or high price

Table 6-27 Odds Ratios from Table 6-26 (Gaelic Artistic and Craft Products)

Income/Age Odds Ratios			
	Younger	M.Aged	Older
Low income	0.3816	0.5493	0.3102
High Income	0.4729	0.4086	0.3365
Odds ratio	0.81	1.34	0.92

6.5. Brief summary of consumption trends

The picture presented above, while confirming that each product has its peculiarities in terms of clientele, illustrates several general trends.

6.5.1. Locality/ Rurality

All the cases studied indicate that consumption is either unaffected by the town/ rural split, (Exhibitions/ Plays/ Poetry/ Psalms/ Arts &Crafts) or is more likely for those living in rural areas (Concerts/ Ceilidhs; Music in Clubs/ Pubs; Choirs; Traditional Dance; CDs/ Tapes; Children's Books; Books; Sheet Music; Videos) . In each of the cases where the likelihood of consumption decreases within a town

setting/ increases with rurality, the odds are very similar, (between 0.83 - 0.88, with sheet music being a slight outlier at 0.80).

Neither is there any easily discernible conceptual split between the type of consumption which illustrated a location neutral effect as opposed to being impacted positively by rurality - i.e. one class of good or event is not 'participative' as opposed to the other being 'observed' events etc.

Current literature on the situation of the Western Isles and the Gaelic Economy consistently suggests that there is a higher overall connection to/ empathy with Gaelic culture in the rural areas as a whole, due to issues such as the higher use of Gaelic in the domestic situation (MacKinnon 1990). These observations would tend to support this view.

6.5.2. Income

In all cases apart from music in Clubs/ Pubs, and the purchase of Gaelic books, below median income tends to work against the consumption of the events/ activities goods in question.

In four instances - Psalm singing; Choirs, CDs and Videos, the factors are approximately around the magnitude of 0.90. In analysing this we should note that Psalm singing is not particularly amenable to orthodox economic analysis given its direct religious nature and significance, which removes from it the character of a 'normal' good.

In the case of choirs however we may note that the costs of attending are normally of a smaller magnitude than those incurred when attending the category of events / activities similar to Concerts/ Ceilidhs. This being the case, it can be logically assumed that the deterrence effect of possessing a lower income will be less in the former case than in the latter category, hence the higher odds of attending.

Similarly with CDs, Videos and tapes, from a rational economic point of view, these commodities can be understood as providing a repeatable stream of services over time and therefore the enjoyment of such products may be perceived by the

consumer to be cheaper over any particular time period, than attendance at such events as concerts/ ceilidhs.

Interestingly the fact that (low) income plays a greater role in deterring consumption of childrens books (likelihood of attendance when of low income is a factor of 0.84) when directly compared to non children's books (where income is a neutral factor) may illustrate the fact that these books are bought to benefit others, rather than the individual directly making the purchase. It is in the case of exhibitions that the greatest odds against attending due to low income are seen (0.73). Given the low customary charges for entrance to such events/ activities there is no clear explanatory reason why the attendance should be so unduly affected by income other than perhaps a social class effect – attendance at museums etc may be seen to be a more middle class activity – which itself is normally associated with higher income.

6.5.3. Gender

With the exception of attending musical events in Clubs/ Pubs, in all cases where gender is found to be significant, the odds in favour of consumption are increased if the gender of the respondent is female. For Plays/ Theatres, Choirs, Sheet music, purchasing Children's' Books the result is most marked, with odds of approximately 1.23, followed by lesser odds of 1.11 in the case of purchasing CDs and attending Psalm singing. In the case of story telling/ poetry, arts and craft products and purchasing (non childrens) books however, gender is dropped from the model, indicating that women and men are each as likely as the other to consume the good in question.

This result in terms of Plays/ Theatre, choirs and purchasing childrens books are in line with generally known facts about these activities in other linguistic cultures. On balance, women are more likely to attend theatre/ plays than men (Arts Council of England 2000: p104). Women generally are perceived to have responsibility to cater for the needs of children, and are thus the major buyers of children's books (Oskamp and Constanzo 1993). In the case of choirs, the strong tendency for English speaking males not to attend such events (compared to the almost gender free actions of fluent

speakers in this regard), gives emphasis to the figures regarding an overall propensity for women to attend.

6.5.4. Age

In analysing the age profile of those attending/ consuming GLAC related goods, it can be shown that many of the results replicate some well known features of similar English language activities. Thus the odds of attendance/ participation in musical performances in Clubs/ Pubs can be seen to be higher for younger people (1.59), as can attendance at/ participation in Concerts/ Ceilidhs. (1.16) This is also the case for individuals in the middle age group, although the relative order of the odds is reversed in this case (1.40 for Ceilidhs, 1.18 for Clubs/ Pubs).

In Traditional Dance (Highland, Hebridean and Ceilidh dancing), there is a substantial under representation in the oldest age group (attendance factor of 0.56), possibly representing the religious profile of the population, and the physical and participative aspect of this type of activity.

For Exhibitions and Plays/ Theatres, odds are in favour of the middle age group attending, (1.22 and 1.55 respectively)which replicates well known features of similar activities in the majority language culture. Odds for Psalm singing suggest that fewer young people will attend than the sample average (0.87), again a relatively well accepted phenomenon in relation to religious attendance.

The main effect odds for CDs /tapes, Videos and non Children's' books are of interest. For younger people the odds are similar - (0.70) for CDs/ tapes and (0.74) for books, (0.78) for Videos . In the case of books this may represent the common trend for books to be bought by older age groups, while for CDs/tapes and videos, the low odds may at first look surprising. However in the case of CDs/ tapes, this latter result may reflect the much greater choice of English language music available at present and the peer pressure and advertising to adopt the majority tastes in current music. Dealing with the same two groups of commodities however, it is seen that for the middle age group, odds are in favour of consumption of CDs/ tapes (1.15), yet are not significant for books. The former result may reflect the return to mother tongue cultures which is often a feature of 'second generations' within a bilingual setting

(MacKinnon 1994), whilst the failure of this to be similarly replicated in relation to Gaelic books, may represent the oral nature of the Gaelic language and the fact that the 36 to 50 year old age group were precisely the age group who were discouraged from reading and writing Gaelic, unlike the younger age group who have begun to benefit from the advantages of Gaelic Medium Education. Odds for Videos are less easy to interpret, with the youngest age group the least likely to consume. Again this may represent the extremely limited availability of Gaelic medium videos compared to the range available in the English language.

Finally, the purchase of Children's books is seen to be positively influenced by membership of the younger age group (20 - 35), by a factor of 1.16, and even more positively influenced by membership of the middle aged group (odds 1.62). This may reflect the tendency for families to be started at an older rather than a younger age.

6.5.5. Fluency

Unsurprisingly, fluency in spoken Gaelic is a significant factor in explaining odds of consumption for the majority of goods in question, with the two exceptions being Traditional Dance - i.e. Highland, Hebridean, Ceilidh dancing, and Gaelic related arts, crafts and print products which are neutral in relation to the language. These results are unsurprising, reflecting in the case of the former, the physical and non linguistic nature of involvement in what is one of the most prominent cultural aspects of the Gaelic economy, and in the case of the latter, the symbolic rather than linguistic nature of such products.

The extent to which fluency increases the odds of consumption for the other products may be seen in four broad groupings.

Fluency, though positive, has least impact in the first grouping of Exhibitions (Odds 1.10); Concerts/ Ceilidhs; Music in Clubs/ Pubs; Choirs (Odds 1.15 - 1.17). This again is unsurprising given the musical/ artistic nature of the majority of these activities, able to be enjoyed with a minimum of Gaelic activity. In the case of exhibitions, the universal practice of providing translations, means that they can be understood as well linguistically, if perhaps not as completely culturally by both English and Gaelic speakers.

The second band of activities/ events can be seen in relation to Plays/ Theatre; Story telling/ Poetry and Psalm Singing (Odds 1.26 - 1.27). Here a greater level of fluency is required to enjoy consumption fully, although as outlined earlier, in the case of Plays/ Theatre and Story telling/ Poetry, a high emphasis on providing English language interpretation/ translation means the enjoyment of such consumption is no longer barred to monolingual English speakers. Psalm singing, conducted in the Gaelic language, whilst included in this group, can not be regarded as a 'normal' good, and thus the interpretation of the factors behind attendance/ participation at such events must necessarily remain complex.

The higher odds connecting Gaelic fluency with the purchase of Children's books in Gaelic (1.47) and with Gaelic language videos (1.49), may represent several factors at work. Firstly, it may be the fact that Gaelic speakers are more likely than non Gaelic speakers to have Gaelic speaking children themselves for whom to buy books, or to have relatives/ friends for whose children such purchases would be appropriate. Secondly, the nature of childrens books is such that a level of parental involvement (and thus a level of fluency of the language), is normal in terms of reading to children/ aiding their comprehension. This may also be the case in relation to videos bought for children. Again this would suggest that fluent speakers were more able to take part in this activity.

The final grouping can be found relative to purchases of Gaelic CDs/ tapes (1.54), and non childrens books (1.57). In the case of non childrens books, the direct link between fluency and comprehension is clear, thus making these odds a realistic reflection of whether a consumer living within the Gaelic economy would buy such items. In relation to CDs, the rather high odds observed might suggest that whilst Gaelic music in this format should appeal to a wide range of consumers irrespective of linguistic ability, it appears to be the case that at the present level of Gaelic language renaissance, it still tends to be fluent speakers who value such consumption enough to make the necessary monetary outlay

6.6. Constraints on consumer demand for GLAC related goods

Following an examination of the factors behind the consumption of GLAC related goods, an area investigated by the survey was whether any identifiable constraints

were evident in shaping consumption patterns. Respondents were asked to identify the effect of the following factors as possible constraints:

- Local availability
- Level of entry price
- Perceived lack of relevance
- Personal level of Gaelic to appreciate the event
- Lack of interest in Gaelic related events
- Lack of interest in the specific event

The outcome of the responses can be seen below in Table 6-28