## Truce Terms

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A 'truce term' (in the terminology used by child folklorists) is a term which gives you temporary immunity when you are playing a game. It does not mean that you are giving in, or giving up, but gives a period of temporary respite. Sometimes children establish the grounds for granting truces (e.g. not allowed for being puffed or getting a drink, but allowed for taking off excess clothing or tying up shoelaces) at the start of a game; sometimes they agree that there will be no truces (e.g. by saying "No pegs" which means that the use of the truce term pegs will not be allowed in this game).
Question 1(d) asked about truce terms in the basic chasing game. The question was a sub-part of a question about this game:
1 At your school, do children play a game with many players where one player has to run and try to touch another player while all the other players try to run away and not get touched?
(a)
(b) ...
(c) ...
(d) Is there a word which you can say to show that you are not playing for a short time, for instance because you need to tie up your shoelace?

Question 1(d) produced a considerable variety of different responses, 83 in all. Reducing this data to manageable proportions was not entirely straightforward. Forms occurring only once (e.g. jinx, taiho, halftime, nots (probably knots), Bali (for barley)) were eliminated, even where it is known that these are regional terms from Britain.
Certain other variants were grouped together:
Pegs includes pegsed, pex, pax, pags, and perhaps more controversially pads and paxted.
Poison includes poisons, poisoned, poisonous.
Quits includes quitsies, quids and quince.
Fans includes fangs.
Tags includes tag, tax, taxed.
Time out includes time and a T hand or finger gesture.
Certain groups were made on semantic rather than formal grounds:
Wait includes hold, hold on/up, hang on, wait on/up, wait there.
Stop includes pause(d).
Den includes base, home.
Even after all that simplification of categories, there were still over twenty forms left in the analysis. Further small categories (fewer than 5 occurrences) which did not show any regional tendency were then eliminated (e.g. (white) rabbits). The remaining terms fell into two broad groups. The first group could be regarded as ordinary language terms asking for a truce: time (out), stop, not playing/ready, wait. While these were quite common responses, they did not appear to show any evidence of regional distribution. The second group consists of special terms whose use in this context could not be predicted from their meaning: pegs, bags, fans, twig(s), nibs, gates, tags, flicks, quits, and perhaps more
controversially, poison and safe. A number of these showed clear patterns of regional distribution. Only this second group was considered further.
There are five of these terms which are strongly regional in their distribution. The clearest case is nibs, which is found in Southland/Otago, almost to the exclusion of any other term. The boundary of the nibs region is very similar to that found with other chasing-game terms: the Central Otago Lakes district is not part of this linguistic cluster, but it extends north as far as the Maniototo and the Clutha Valley.
Fans is restricted to the Wellington region. It is found almost to the exclusion of other terms in the Wellington urban area, and is reported as far north as N.Wairarapa, but not in the Manawatu. Because of a shortage of data in the Wairarapa, it is not clear how widespread it is there. Two schools in the Wellington area reported fangs as well: this looks like the kind of joke which pervades the data, but it may point to a change to come. School visits confirmed that it is not used in the north of the Wellington sub-region, and neither is it known in southern Hawkes Bay.
Gates is largely restricted to the Auckland urban area. It is not the dominant term there, but coexists with a variety of other forms. However, six schools in that area reported it. There was one isolated occurrence in the central North Island.
During school visits, it was reported from another school in the Auckland subregion, but was not known in the other schools visited in the Northern Region. Twig(s) is fairly strongly regionalised to Taranaki, where it is found almost to the exclusion of other terms. However, there are two reports of this term in the Hauraki Plains south-east of Auckland, and another in Northland (in a school which we know to have a population drawn from many other areas). We presume that these occurrences outside Taranaki are produced by mobile populations, although one school in the Hauraki Plains reported no other terms, which is surprising. Two years later, during school visits, this term was still in use in the Northland school which originally reported it. The children said they had learned it at pre-school.
The terms tags, tag, taxed (which were grouped together) are also concentrated in the north of the Nelson and Marlborough areas of the South Island. Again, they are found there almost to the exclusion of other terms, although one school in the area did not report this term. There are two reports of this term from Northland, as well, which is quite unexpected and no obvious explanation for this presents itself. Statistically, the regionalisation to Nelson - Marlborough is not significant. Some of the other minor terms also have regional strongholds. Safe has only five occurrences in all, but all of them are in the South Island, three in Canterbury. (One of the others is in the far south of Southland, which regularly reports a mixture of regional terms, presumably because the establishment of the aluminium smelter there has brought in many outsiders.)
Quits (with only eight occurrences) is a North Island term, although there is one report from Christchurch. Five of the eight occurrences are in the Auckland urban area.
Flicks/flix is a lower North Island term. Four of the five reports of this term are in the Wellington and Wairarapa regions. (The other is from central Auckland, presumably an import.) Because Wellington and Wairarapa are not in the same sub-region on our analysis, this regionalisation is not supported statistically.

This leaves three high-frequency terms. Two of these also show a strong tendency to regional distribution, although there are quite a number of reports from areas outside the dominant region. Bags is fairly regularly reported as far south as the Hauraki Plains, but is reported only sporadically south of that area. Poison is found with great regularity in the North Island as far south as the Manawatu, but only very sporadically south of that. However, the southern border of this term is further south than the border between the Northern and Central areas falls in other sets of data. During school visits, a number of schools in the Northern Region reported that poison is reserved exclusively for the game Handball/Four Square. It is thus in all probability not a competitor with pegs, which is used in games like Tiggy.
The "elsewhere" truce term is pegs. It is reported by almost every school from Northland to Manawatu, where it gives way to fans. It is then reported by almost every school from the south of the Nelson district (including the West Coast), as far as the Clutha River, where it gives way to nibs. While it competes with bags and /or poison in the North Island, it is found almost to the exclusion of other terms in the central areas of the South Island.
A table showing the distribution of these three last terms follows.

|  | Northern |  | Central |  | Southern |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | No. | $\%$ | No. | $\%$ | No. | $\%$ |
| Schools | 57 | 38 | 78 | 52 | 14 | 9 |
| bags | 19 | 73 | 7 | 27 | 0 | 0 |
| poison | 22 | 51 | 19 | 44 | 2 | 5 |
| pegs | 37 | 40 | 53 | 57 | 3 | 3 |

Two maps are included to illustrate this data. The first contains the very localised truce terms. The second contains the three forms from the last table.

## Statistical Analysis

Because of the large number of terms in this set which appeared to be regionalised in very small regions, the statistical analysis was less satisfactory than with many other sets of data. In particular, this was a problem in terms of analysis into sub-regions. The following information was deduced from the statistical analysis.

## Bags

Bags is more common in the Northern Region than the Southern Region, (p-value 0.0001 ), and more common in the Northern than the Central Region ( $p$-value $0.0004)$. Bags was reported from all sub-regions except the West Coast and Southland-Otago. When just the Northern Region sub-regions are considered, bags is significantly more common in WNth (p-value 0.0101) and Ak (0.0052) than in CNIs. When just the North Island sub-regions are considered, bags is significantly more common in WNth (p-value 0.0053 ) and Ak ( 0.0050 ) than in Wn. Bags was shown to be significantly more common in the North Island than the South ( $p$-value 0.0137 ). This was predictable in light of its prominence in the Northern Region.

## Fans

Fans is more common in high decile schools (p-value 0.0340). The term fans is found only in the Wellington sub-region. Fans is also more common in Catholic
schools than non-Catholic schools (p-value 0.0167). This is almost certainly just a reflection of the distribution of Catholic schools in the Wellington region.
Similarly, fans was the only truce term affected by the Urban/Rural distribution: it was more common (p-value 0.0116) in urban than rural schools. This is also a reflection of the dominance of the Wellington urban area in the Wellington subregion. When just the Wellington sub-region is considered, fans was not significantly correlated with any of these other factors, which shows clearly that they are a reflection of the characteristics of the participating schools in this region.
Flix
Flix is just significantly high decile (p-value 0.0440). It is more common in the Northern Region than the Southern Region (p-value 0.0001), but no figure is given by the program for the comparison between the Central Region and the Southern Region. Since all occurrences of flix except one are in the Central Region, this lack of result is counter-intuitive. The sub-regional analysis confirmed that almost all the occurrences are in the Wellington sub-region. The correlation with high decile is almost certainly a result of the Wellington subregion location.

## Gates

Gates is found only in the Northern Region. When just the Northern Region was considered, gates is shown to be significantly more common in Ak (p-value 0.0309 ) than CNIs.

Nibs
Because there was one occurrence of nibs outside the Southern Region (in the nearest school in the Central Region), the program reported that nibs was significantly less common in the Central than the Southern Region (p-value 0.0001 ). However, with no occurrences of nibs in the Northern Region, the pvalue comparing the Northern and Southern Regions was 0.9998, which, of course is not significant at all, contrary to expectations. Nibs was reported as significantly less common in sub-region T-CL than in S-O (p-value 0.0022). This confirms that it is predominantly restricted to the Southern Region.
Pegs
Pegs is commoner in both the Northern and Central Regions than in the Southern Region (p-values respectively 0.0069 and 0.0041 ). However, the difference between the Northern and Central Regions is not significant (p-value 0.0766), although the fact that the p-value is not so far above the significant figure (0.05) shows that there is clearly a tendency for pegs to be more common in the Central Region than the Northern Region.
Pegs was reported as significantly more common in many sub-regions than in S-O. For WNth the p-value was 0.0225 ; for CNIs 0.0067 ; for HB 0.0027 ; for WCst 0.0225 ; for Chch 0.0007.

Clearly, the most important fact about pegs is that it is much less common in the Southern Region than elsewhere.
Poison
All three regional comparisons for poison were calculated, and none was significant. However, poison is significantly more common in the North Island (pvalue 0.0078 ) than the South.

## Quits

Quits is significantly more common in the Northern Region than in the Southern Region (p-value 0.0001). When the Southern Region was eliminated, quits was shown to be significantly more common in the Northern Region than the Central (0.0283). Quits was reported as significantly more common in both Ak and CNIs than in S-O (p-value 0.0001 in both cases). All other sub-regions except Chch were recorded as identical to S-O, in not having quits. Considering just the North Island, quits is significantly more common in Ak (p-value 0.0001) than in Wn. When S-O was excluded, quits was more common in Ak and CNIs than T-CL (both p-values 0.0001).
This confirms that quits is largely an Auckland and Central North Island form.

## Tags

Tags is significantly more common in the Northern Region than in the Southern Region (p-value 0.0001). Tags, however, is another case where the result is counter-intuitive: there are more instances of tags in the Central Region than in the Northern Region, and none in the Southern Region, but the program does not produce a figure for the Central-Southern comparison. Tags was reported as significantly more common in ENth than in S-O (p-value 0.0001). All other regions were recorded as identical to $\mathrm{S}-\mathrm{O}$ (ie do not report tags) except region 7, Nelson-Marlborough, which is reported as having a large sampling error. This is the region where tags is most frequent, so the figures here are also counterintuitive. When S-O was excluded, tags was more common in ENth than T-CL (0.0001). Tags is less common in the North Island than the South (p-value 0.0445). Twigs
Because twigs is reported almost exclusively from the Central Region, and not at all from the Southern Region, the figures produced by the program for this form are also unhelpful. For twigs, WNth is reported as significantly more likely to have twigs than S-O, and all other regions except 4 (CNIs) are recorded as identical to S-O in not having twigs. CNIs includes Taranaki and the Hauraki Plains, where almost all the reports of twigs are found, so again, the lack of a high $p$-value for the comparison with this region is counter-intuitive. Considering just the North Island, twigs is significantly more common in WNth than in Wn (but this comparison still does not report the regionalisation to CNIs as significant.) When S-O was excluded, twigs was more common in WNth (0.0001) than in T-CL.
Again, the statistical process failed to produce a result which reflects what we know about the distribution of this form.

## What we know of these terms elsewhere

The major published source of information on truce terms in Britain is Iona and Peter Opie's The Lore and Language of School Children (pp. 141-153). Some British truce terms are amongst those in use in New Zealand, but not all NZ terms are traceable to British terms recorded there. An article by Mary and Herbert Knapp outlines the truce terms found in the USA (Knapp \& Knapp, 1973). The Knapps found that the principal truce terms in the USA in 1973 were time (out) and forms related to Kings X. While time (out) was found quite frequently in our survey, there was no evidence here of Kings $X$ (or the related terms found in both the USA and Britain). Truce terms do not appear to have been recorded in Harry

Orsman's data base of NZ English: there was no record there even of the common form pegs, let alone the regionally restricted terms.

## Pegs

We presume pegs, (including pegsed, pex, pags, pagsed) to be derived from pax (also attested in one case). The Opies found that pax was not a regional term in Britain: "The usual term in private schools and school stories, 'pax' is group dialect not regional dialect" $(1959,152)$. Why this rather upper-class term should have become the norm in NZ is an interesting, but probably unanswerable question. The most likely hypothesis is that it derived from the books and comics about life in British public schools. From our survey of Listener readers, it is clear that pax came to NZ in the 1920s and it was reported throughout the country in that decade. However, many respondents of that period reported that they did not have a truce term. In the 1940s pax became the norm for most respondents. Nibs
We have not traced any other occurrences of nibs. It was not known by Iona Opie, who has studied these terms in Britain (there is no mention in Opie, 1959, and she confirmed by personal communication that she had not encountered it). Given the location in NZ in which it is found, the obvious hypothesis is that it is a Scottish term, but we have not been able to confirm this: it is not recorded in the Scottish National Dictionary (nor the OED) (the normal truce terms in Scotland in 1959 were barley or keys), and personal contacts in Scotland know only the standard Scottish truce terms.
One possible explanation is that it is a corruption of nix in the sense "nothing doing". (The use of this term to warn of the approach of a figure of authority, such as a teacher, may also play a part.) The likelihood that this is the origin is increased by the information (personal communication) from Marc Armitage of the Playpeople project based in Hull, UK, that the truce term nigs or nix was reported as used in South Africa by a boy who had moved from South Africa to Yorkshire. The term nix was confirmed as normal in South Africa by a visiting S. African linguist (Vivien de Klerk, personal communication), who was able to tell us that it comes to S . Africa via Afrikaans. Nibs would be a likely rationalisation from nigs/nix. If nix is indeed the origin, it is British public school slang, like pax (which gives rise to pegs); its strong regionalisation in NZ must then be good evidence for the cohesiveness and exclusiveness of the Southland-Otago linguistic region. However, there is an alternative origin: the Opies report (1959, 152) that nicks or nix was reported in Warwick, where it used to be nicklas. However, there is no obvious reason why a Warwick term should be transplanted to Southland-Otago. The earliest report of nibs from the Listener respondents was in the 1940s, and it has gradually ousted pax in that region. (It was also reported (Dianne Bardsley, personal communication) that nibs was used in the Wairarapa in the 1940s, although there is no trace of it there in our data now.)

## Fans

Fans is likely to derive from fains (a form of fainites), which is known in the south of Britain. The Opies identify its range as "London and throughout southern England from Margate to Penzance" $(1959,151)$ except for some areas of east Hampshire and Devon. They found the variant fans in Gillingham in Kent. They have traced the term back to medieval English. It was first reported by our Listener readers before 1920, in the singular; the plural was the norm in the

1920's, and although it coexisted with pax in the Wellington region throughout the 1900s, it has always been the dominant term there. It was presumably brought from Britain by the settlers. Its restriction to the Wellington region is likely to provide good evidence of the cohesion and separateness of that region.

## Quits

Quits was also noted by the Opies in various parts of Britain, but they comment that it is "probably not an 'authentic' truce term". It was first reported by Listener readers in the Northern Region (Auckland, Bay of Plenty) in the 1960s. It may thus have been brought by British migrants at that time. It was also reported by Listener respondents in Wellington in the 1930s-50s, but it then vanished in that area, presumably unable to survive against the widespread pax and fans.

## Twigs

Twigs was found by the Opies in Penrith, and recollected from Cumbria. It apparently derives from a custom of crossing two twigs as a truce sign. The source of its importation to the Taranaki area remains a mystery. To judge by the reports of our Taranaki Listener respondents, it appeared in Taranaki in the 1970s, and seems almost to have ousted pax/pegs there. It seems likely that the reports in our data outside Taranaki are the result of Taranaki migrants.

None of the remaining common NZ truce terms (bags, poison, gates, tags, flicks, safe) is listed by the Opies (although some of those which were reported just once here, like barley, den are found in Britain). A search of dictionaries did not produce anything of value. None of these terms is listed as a truce term in any of the other major regional varieties of English (checks were made of the Scottish National Dictionary, Webster's and Random House (for the USA), the Canadian Oxford, the Australian National Dictionary and the Macquarie Dictionary, and the South African Dictionary).

## Safe

The use of safe in this context is presumably just a minor extension of its normal language use. It is possible that the use of this term in baseball has influenced its use in this way.

## Poison

The use of poison, is probably also an extension of the normal language use, although the semantics are very different from safe. The rationale must be that you claim that you are poison (or poisonous) to inhibit the chaser from touching you. It should perhaps be noted that it was the name for a particular hole when playing marbles, but we have not been able to trace any possible connection between this and the use as a truce term. However, during school visits, it became clear that in at least some schools this term is confined to the game Four Square or Hand Ball.

## Tags

It seems possible that tags (which includes tax(ed), tag) is, like pegs, a corruption of pax. If this is the case, then tax, rather than tags is presumably the basic form; the fact that it is used in the game of Tag presumably contributed to the change in the final segment. However, Marc Armitage (personal communication) reports that since 1994, he has met tax/taxed/taxes/tax it as a truce term in Britain with increasing frequency. This would appear to throw doubt on the origin in pax, since pax was not a normal truce term in the area of Britain where these forms are appearing. It also calls into question which form is basic in the set. Further
questions about its origin are raised by the fact that in the Nelson-Marlborough area, its stronghold, it was first reported by Listener respondents in the 1930s. This was before the period when pax became common, although pax was reported in that area in the 1920s. It would perhaps be surprising if the corruption took place before the term became widespread.

## Bags

Bags may also be a corruption of pax. The fact that it is quite widespread tends to confirm this. If pax was first corrupted to pags, then either pegs or bags would be a likely rationalisation towards a known item. This may have been indirectly reinforced by the use of bags in the sense "to lay claim to", as in I bags the back seat. If you bag(s) the back seat, you have reserved or saved that seat for yourself: the seat is saved or safe. (Both saved and safe occurred in that context in the responses to our questionnaire.) When you want to save yourself from tagging, or to make yourself safe, using the same term probably seems reasonable. It must be noted here that there were a small number of occurrences of bags not and no bags amongst the responses for truce terms. These are commonly used to ensure that something doesn't happen: Bags not put the rubbish in the bin is a formula used to ensure that you will not have to do this job. Bags not thus gives immunity from some situation. No bags is used similarly: if a classmate tries to give you a piece of rubbish, you can say No bags, and (theoretically!) this gives you immunity from receiving it. Both these terms thus also make you safe, and so both the positive and the negative of bags can be seen as conferring immunity, and thus appropriate to use as truce terms. If these hypotheses are correct, then the use of bags as a truce term is the result of a complex interaction between two different sources of the form bags.

## Gates

The origin of the term gates remains a mystery, but our Listener respondents reported its occurrence in the Auckland and Northland regions in the 1920s. It was quite widespread in the 1930s and 40s throughout the Northern Region, but does not appear to have spread south of that. The Listener responses suggest that it was the dominant term Auckland until the 1970s.

## Flicks/Flix

We are able to offer no explanation at all for the term flicks (often spelt flix or flixs). It is a term used in playing marbles, but, as with poison, there does not appear to be any connection between the two uses. Marc Armitage (personal communication) reports that this term was known in South Africa by a boy who moved from there to Yorkshire. Armitage considers it likely that this also derives from pax or nix. It appears to be a recent arrival in the Wellington area, first reported by Listener readers in the 1970s in the form flex.

## Accompanying Gestures

During the school visits, we attempted to gain more systematic information about the gestures which might accompany these truce words. It appears that the only gesture used is crossing the fingers on one hand. Children were asked whether this was optional or obligatory. There was little pattern to be observed, although there was possibly a tendency for girls to demand the gesture more than boys. The obligatoriness of the gesture showed no signs of regionalisation. Safe Places
It was clear from the question about truce terms that names for the safe place in certain games overlapped to some extent with truce terms. We also got data of
this kind from the readers of The Listener who responded to our questions. During the school visits, an attempt was made to find out whether these terms also showed signs of regionalisation.
The questions asked were:
In games that involve having a place which is safe, what do you call the safe place? Is it called the same thing in all the games you play? Do you have a rule about the chaser not being able to stay too close to the safe place? What is the rule?
The simplest question is the last of these. All the schools visited had a rule which forbade the chaser from staying close to the safe place, and the rule was expressed in the same way in all schools: No goose-guarding. This term, however, is not known to the teachers in the schools, who professed themselves astonished at it. It appears to have arrived in NZ in the 1980s, but where it came from we are not sure.
The name of the safe place, however, is not so uniform, and indeed shows signs of regionalisation. In the Northern Region, the standard term is base, although this term is also in much less consistent use in the rest of the country as well. Every school visited from Auckland north reported base. The Central North Island reported a mixture of base and the chief Central Region term: home. Home was reported from every school visited from the Wellington sub-region to Timaru.
In addition, the term den was reported from two of the Southland - Otago schools, and also from one in the Central Lakes district. It was also reported from three isolated schools in the Northern Region. Two schools reported the mixed form home base: one in Northland, and one in Timaru.
Thus the terms for the safe place also show signs of regionalisation. A map showing these terms on the basis of the school visits follows the truce term maps.

## Map 1 for Q1(d): Localised Truce Terms




Key
Note that the insets are not to scale, nor all on the same scale for practical reasons. Each box represents one school in both urban and rural areas. In insets where one school reported two of the mapped terms, one of the shadings was from necessity recorded in the nearest unshaded box.

| $\square$ | fans | $\square$ | gates | $\square$ |
| :--- | :--- | :--- | :--- | :--- |
| twigs | $\square$ | tags | $\square$ | quits(ies) |
| $\square$ | nibs |  | flicks |  |

Map2 for Q1(d): Truce terms pegs, bags and poison



Key
Note that the insets are not to scale, nor all on the same scale for practical reasons. Each box represents one school in both urban and rural areas.

| $\square$ | bags | $\square$ | pegs | $\square$ |
| :--- | :--- | :--- | :--- | :--- |
| poison |  |  | See urban map insert |  |
|  |  | $\square$ | No relevant data/Neither of these |  |

Map 3 for Q1(d): The name of the safe place in hiding and chasing games (school visits)



Key
Note that the insets are not to scale, nor all on the same scale for practical reasons. Each box represents one school in both urban and rural areas.

| $\square$ | home | $\square$ | See urban map insert |
| :--- | :--- | :--- | :--- |
| $\square$ | base | $\boxed{x}$ | school not visited |
| $\square$ | den | $\square$ | no relevant data |

## Statistics for 1d: truce terms

## Truce terms by Decile

Analysis Of GEE Parameter Estimates - Empirical Standard Error Estimates
Empirical 95\% Confidence Limits

| parameter |  | Estimate | Std Err | Lower | Upper | Z | $\operatorname{Pr}>\|\mathrm{Z}\|$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0.000 | . | . | . | . | . |  |
| item | bags | -1.0957 | 0.4899 | -2.0558 | -0.1356 | -2.237 | 0.0253 |
| item | fans | -4.6645 | 1.2267 | -7.0687 | -2.2603 | -3.803 | 0.0001 |
| item | flix | -6.2876 | 1.7048 | -9.6290 | -2.9463 | -3.688 | 0.0002 |
| item | gate | -3.3223 | 1.0605 | -5.4008 | -1.2438 | -3.133 | 0.0017 |
| item | nibs | -2.4206 | 0.6421 | -3.6791 | -1.1621 | -3.770 | 0.0002 |
| item | pegs | 0.9485 | 0.3986 | 0.1673 | 1.7297 | 2.3797 | 0.0173 |
| item | poiso | -0.1990 | 0.3943 | -0.9718 | 0.5738 | -.5046 | 0.6138 |
| item | quit | -4.4757 | 1.0761 | -6.5849 | -2.3665 | -4.159 | 0.0000 |
| item | tags | -2.9626 | 0.4565 | -3.8574 | -2.0679 | -6.490 | 0.0000 |
| item | twig | -2.0537 | 0.6725 | -3.3718 | -0.7356 | -3.054 | 0.0023 |
| decile*item | bags | -0.0840 | 0.0826 | -0.2458 | 0.0778 | -1.017 | 0.3091 |
| decile*item | fans | 0.3294 | 0.1554 | 0.0248 | 0.6341 | 2.1197 | $\mathbf{0 . 0 3 4 0}$ |
| decile*item | flix | 0.4131 | 0.2050 | 0.0112 | 0.8149 | 2.0144 | $\mathbf{0 . 0 4 4 0}$ |
| decile*item | gate | 0.0513 | 0.1611 | -0.2645 | 0.3671 | 0.3185 | 0.7501 |
| decile*item | nibs | 0.0113 | 0.0981 | -0.1811 | 0.2036 | 0.1149 | 0.9085 |
| decile*item | pegs | -0.0834 | 0.0610 | -0.2029 | 0.0361 | -1.368 | 0.1713 |
| decile*item | pois | -0.1282 | 0.0658 | -0.2572 | 0.0008 | -1.948 | 0.0515 |
| decile*item | quit | 0.2438 | 0.1402 | -0.0310 | 0.5186 | 1.7387 | 0.0821 |
| decile*item | tags | 0.0148 | 0.0477 | -0.0788 | 0.1083 | 0.3099 | 0.7567 |
| decile*item | twig | -0.1575 | 0.1191 | -0.3909 | 0.0760 | -1.322 | 0.1862 |
| scale | 0.9938 | . | . | . | . | . |  |

Truce terms by Main Region
Analysis Of Initial Parameter Estimates

| parameter |  | DF | Estimate | Std Err | ChiSquare | Pr>Chi |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0 | 0.00 | 0.0000 | . | . |  |
| item | bags | 1 | -27.3653 | 0.3962 | 4771.5887 | 0.0001 |
| item | fans | 1 | -27.3654 | 0.3138 | 7603.8579 | 0.0001 |
| item | flix | 1 | -27.3653 | 0.5133 | 2841.8165 | 0.0001 |
| item | gate | 1 | -27.3653 | 0.4036 | 4598.2468 | 0.0001 |
| item | nibs | 1 | 1.7918 | 0.7638 | 5.5035 | 0.0190 |
| item | pegs | 1 | -1.2993 | 0.6513 | 3.9792 | 0.0461 |
| item | pois | 1 | -1.7918 | 0.7638 | 5.5035 | 0.0190 |
| item | quit | 1 | -27.3659 | 1.0065 | 739.2923 | 0.0001 |
| item | tags | 1 | -27.3655 | 0.4249 | 4147.5955 | 0.0001 |
| item | twig | 1 | -27.3653 | 0.3813 | 5150.0404 | 0.0001 |
| item*region1 | bags, 1 | 1 | 26.6722 | 0.4857 | 3015.8465 | $\mathbf{0 . 0 0 0 1}$ |
| item*region1 | bags, 2 | 0 | 25.0486 | 0.0000 | . | . |
| item*region1 | bags, 3 | 0 | 0.0000 | 0.0000 | . | . |


| item*region1 | fans, 1 | 1 | 0.0001 | 115975.683 | 0.0000 | 1.0000 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| item*region1 | fans, 2 | 0 | 25.6606 | 0.0000 | . | . |
| item*region1 | fans, 3 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | flix, 1 | 1 | 23.3399 | 1.1320 | 425.1315 | $\mathbf{0 . 0 0 0 1}$ |
| item*region1 | flix, 2 | 0 | 24.4475 | 0.0000 | . | . |
| item*region1 | flix, 3 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | gate, 1 | 0 | 25.3991 | 0.0000 | . | . |
| item*region1 | gate, 2 | 1 | -0.0001 | 99141.8609 | 0.0000 | 1.0000 |
| item*region1 | gate, 3 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | nibs, 1 | 1 | -29.1571 | 115975.683 | 0.0000 | 0.9998 |
| item*region1 | nibs, 2 | 1 | -6.1356 | 1.2635 | 23.5825 | $\mathbf{0 . 0 0 0 1}$ |
| item*region1 | nibs, 3 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | pegs, 1 | 1 | 1.9145 | 0.7080 | 7.3118 | $\mathbf{0 . 0 0 6 9}$ |
| item*region1 | pegs, 2 | 1 | 1.9924 | 0.6942 | 8.2372 | $\mathbf{0 . 0 0 4 1}$ |
| item*region1 | pegs, 3 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | pois, 1 | 1 | 1.3275 | 0.8108 | 2.6806 | 0.1016 |
| item*region1 | pois, 2 | 1 | 0.6587 | 0.8080 | 0.6645 | 0.4150 |
| item*region1 | pois, 3 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | quit, 1 | 1 | 25.3998 | 1.0844 | 548.6698 | $\mathbf{0 . 0 0 0 1}$ |
| item*region1 | quit, 2 | 0 | 23.0221 | 0.0000 | . | . |
| item*region1 | quit, 3 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | tags, 1 | 1 | 24.0513 | 0.8359 | 827.8739 | $\mathbf{0 . 0 0 0 1}$ |
| item*region1 | tags, 2 | 0 | 24.8806 | 0.0000 | . | . |
| item*region1 | tags, 3 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | twig, 1 | 0 | 25.5529 | 0.0000 | . | . |
| item*region1 | twig, 2 | 1 | -0.0001 | 99141.8609 | 0.0000 | 1.0000 |
| item*region1 | twig, 3 | 0 | 0.0000 | 0.0000 | . | . |
| scale | 0 | 1.00 | 0.0000 | . | . |  |

## Truce terms by Sub-Regions

Analysis Of Initial Parameter Estimates

| parameter |  | DF | Estimate | Std Err | ChiSquare | Pr>Chi |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0 | 0.00 | 0.0000 | . | . |  |
| item | bags | 1 | -26.3653 | 1.0541 | 625.6154 | 0.0001 |
| item | fans | 1 | -26.3653 | 0.4282 | 3791.6242 | 0.0001 |
| item | flix | 1 | -26.3653 | 0.5528 | 2274.9743 | 0.0001 |
| item | gate | 1 | -26.3654 | 1.0198 | 668.3984 | 0.0001 |
| item | nibs | 1 | 1.7918 | 0.7638 | 5.5035 | 0.0190 |
| item | pegs | 1 | -1.2993 | 0.6513 | 3.9792 | 0.0461 |
| item | pois | 1 | -1.7918 | 0.7638 | 5.5035 | 0.0190 |
| item | quit | 1 | -26.3654 | 1.0290 | 656.5167 | 0.0001 |
| item | tags | 1 | -26.3653 | 0.7071 | 1390.2530 | 0.0001 |
| item | twig | 1 | -26.3654 | 0.4421 | 3555.8731 | 0.0001 |
| item*region2 | bags, 1 | 1 | 27.0584 | 1.3642 | 393.3987 | $\mathbf{0 . 0 0 0 1}$ |
| item*region2 | bags, 2 | 1 | 25.6721 | 1.3642 | 354.1211 | $\mathbf{0 . 0 0 0 1}$ |


| item*region2 | bags, 3 | 1 | 26.4706 | 1.1499 | 529.9374 | 0.0001 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| item*region2 | bags, 4 | 1 | 24.3284 | 1.2198 | 397.7835 | 0.0001 |
| item*region2 | bags, 5 | 1 | 24.7558 | 1.3081 | 358.1602 | 0.0001 |
| item*region2 | bags, 6 | 1 | 23.3208 | 1.4693 | 251.9342 | 0.0001 |
| item*region2 | bags, 7 | 1 | 24.2858 | 1.4954 | 263.7625 | 0.0001 |
| item*region2 | bags, 8 | 1 | -0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | bags, 9 | 1 | 24.2858 | 1.2937 | 352.4129 | 0.0001 |
| item*region2 | bags, 10 | 0 | 24.1681 | 0.0000 |  |  |
| item*region2 | bags, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | fans, 1 | 1 | 0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | fans, 2 | 1 | 0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | fans, 3 | 1 | 0.0000 | 121837.317 | 0.0000 | 1.0000 |
| item*region2 | fans, 4 | 1 | 0.0000 | 104152.681 | 0.0000 | 1.0000 |
| item*region2 | fans, 5 | 1 | 0.0000 | 153308.595 | 0.0000 | 1.0000 |
| item*region2 | fans, 6 | 0 | 26.5477 | 0.0000 |  |  |
| item*region2 | fans, 7 | 1 | 0.0000 | 177025.517 | 0.0000 | 1.0000 |
| item*region2 | fans, 8 | 1 | 0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | fans, 9 | 1 | 0.0000 | 125175.944 | 0.0000 | 1.0000 |
| item*region2 | fans, 10 | 1 | 0.0000 | 167941.152 | 0.0000 | 1.0000 |
| item*region2 | fans, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | flix, 1 | 1 | 0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | flix, 2 | 1 | 0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | flix, 3 | 1 | 23.4750 | 1.1667 | 404.8707 | 0.0001 |
| item*region2 | flix, 4 | 1 | 0.0000 | 104152.681 | 0.0000 | 1.0000 |
| item*region2 | flix, 5 | 1 | 0.0000 | 153308.595 | 0.0000 | 1.0000 |
| item*region2 | flix, 6 | 0 | 24.8613 | 0.0000 |  |  |
| item*region2 | flix, 7 | 1 | 0.0000 | 177025.517 | 0.0000 | 1.0000 |
| item*region2 | flix, 8 | 1 | 0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | flix, 9 | 1 | 0.0000 | 125175.944 | 0.0000 | 1.0000 |
| item*region2 | flix, 10 | 1 | 0.0000 | 167941.152 | 0.0000 | 1.0000 |
| item*region2 | flix, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | gate, 1 | 1 | 0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | gate, 2 | 1 | 0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | gate, 3 | 1 | 25.5922 | 1.1330 | 510.2575 | 0.0001 |
| item*region2 | gate, 4 | 0 | 23.1465 | 0.0000 |  |  |
| item*region2 | gate, 5 | 1 | 0.0001 | 153308.595 | 0.0000 | 1.0000 |
| item*region2 | gate, 6 | 1 | 0.0001 | 113225.901 | 0.0000 | 1.0000 |
| item*region2 | gate, 7 | 1 | 0.0001 | 177025.517 | 0.0000 | 1.0000 |
| item*region2 | gate, 8 | 1 | 0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | gate, 9 | 1 | 0.0001 | 125175.944 | 0.0000 | 1.0000 |
| item*region2 | gate, 10 | 1 | 0.0001 | 167941.152 | 0.0000 | 1.0000 |
| item*region2 | gate, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | nibs, 1 | 1 | -28.1571 | 216811.094 | 0.0000 | 0.9999 |
| item*region2 | nibs, 2 | 1 | -28.1571 | 216811.094 | 0.0000 | 0.9999 |
| item*region2 | nibs, 3 | 1 | -28.1571 | 121837.317 | 0.0000 | 0.9998 |


| item*region2 | nibs, 4 | 1 | -28.1571 | 104152.681 | 0.0000 | 0.9998 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| item*region2 | nibs, 5 | 1 | -28.1571 | 153308.595 | 0.0000 | 0.9999 |
| item*region2 | nibs, 6 | 1 | -28.1571 | 113225.901 | 0.0000 | 0.9998 |
| item*region2 | nibs, 7 | 1 | -28.1571 | 177025.517 | 0.0000 | 0.9999 |
| item*region2 | nibs, 8 | 1 | -28.1571 | 216811.094 | 0.0000 | 0.9999 |
| item*region2 | nibs, 9 | 1 | -28.1571 | 125175.944 | 0.0000 | 0.9998 |
| item*region2 | nibs, 10 | 1 | -3.9890 | 1.3017 | 9.3907 | 0.0022 |
| item*region2 | nibs, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | pegs, 1 | 1 | 2.9087 | 1.2745 | 5.2090 | 0.0225 |
| item*region2 | pegs, 2 | 1 | 1.9924 | 1.0836 | 3.3807 | 0.0660 |
| item*region2 | pegs, 3 | 1 | 1.4046 | 0.7971 | 3.1054 | 0.0780 |
| item*region2 | pegs, 4 | 1 | 2.1102 | 0.7777 | 7.3628 | 0.0067 |
| item*region2 | pegs, 5 | 1 | 3.6972 | 1.2309 | 9.0216 | 0.0027 |
| item*region2 | pegs, 6 | 1 | 0.7397 | 0.7878 | 0.8815 | 0.3478 |
| item*region2 | pegs, 7 | 1 | 1.5224 | 0.9350 | 2.6512 | 0.1035 |
| item*region2 | pegs, 8 | 1 | 2.9087 | 1.2745 | 5.2090 | 0.0225 |
| item*region2 | pegs, 9 | 1 | 4.1325 | 1.2178 | 11.5150 | 0.0007 |
| item*region2 | pegs, 10 | 1 | 1.2993 | 0.9079 | 2.0481 | 0.1524 |
| item*region2 | pegs, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | pois, 1 | 1 | 3.4012 | 1.3354 | 6.4868 | 0.0109 |
| item*region2 | pois, 2 | 1 | 1.0986 | 1.1547 | 0.9052 | 0.3414 |
| item*region2 | pois, 3 | 1 | 1.2528 | 0.8997 | 1.9387 | 0.1638 |
| item*region2 | pois, 4 | 1 | 0.9808 | 0.8740 | 1.2594 | 0.2618 |
| item*region2 | pois, 5 | 1 | 2.8904 | 1.0138 | 8.1285 | 0.0044 |
| item*region2 | pois, 6 | 1 | -0.0541 | 0.9845 | 0.0030 | 0.9562 |
| item*region2 | pois, 7 | 1 | 0.5390 | 1.1073 | 0.2369 | 0.6264 |
| item*region2 | pois, 8 | 1 | 0.1823 | 1.3354 | 0.0186 | 0.8914 |
| item*region2 | pois, 9 | 1 | -0.2877 | 1.0704 | 0.0722 | 0.7881 |
| item*region2 | pois, 10 | 1 | 0.4055 | 1.0992 | 0.1361 | 0.7122 |
| item*region2 | pois, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | quit, 1 | 1 | 0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | quit, 2 | 1 | 0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | quit, 3 | 1 | 25.3358 | 1.1534 | 482.5422 | 0.0001 |
| item*region2 | quit, 4 | 1 | 23.8805 | 1.2651 | 356.3151 | 0.0001 |
| item*region2 | quit, 5 | 1 | 0.0001 | 153308.595 | 0.0000 | 1.0000 |
| item*region2 | quit, 6 | 1 | 0.0001 | 113225.901 | 0.0000 | 1.0000 |
| item*region2 | quit, 7 | 1 | 0.0001 | 177025.517 | 0.0000 | 1.0000 |
| item*region2 | quit, 8 | 1 | 0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | quit, 9 | 0 | 23.5322 | 0.0000 |  |  |
| item*region2 | quit, 10 | 1 | 0.0001 | 167941.152 | 0.0000 | 1.0000 |
| item*region2 | quit, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | tags, 1 | 1 | -0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | tags, 2 | 1 | 25.6721 | 1.1180 | 527.2456 | 0.0001 |
| item*region2 | tags, 3 | 1 | -0.0001 | 121837.317 | 0.0000 | 1.0000 |
| item*region2 | tags, 4 | 1 | -0.0001 | 104152.681 | 0.0000 | 1.0000 |


| item*region2 | tags, 5 | 1 | -0.0001 | 153308.595 | 0.0000 | 1.0000 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| item*region2 | tags, 6 | 1 | -0.0001 | 113225.901 | 0.0000 | 1.0000 |
| item*region2 | tags, 7 | 0 | 27.0584 | 0.0000 | . | . |
| item*region2 | tags, 8 | 1 | -0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | tags, 9 | 1 | -0.0001 | 125175.944 | 0.0000 | 1.0000 |
| item*region2 | tags, 10 | 1 | -0.0001 | 167941.152 | 0.0000 | 1.0000 |
| item*region2 | tags, 11 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | twig, 1 | 1 | 24.7559 | 1.1813 | 439.1698 | $\mathbf{0 . 0 0 0 1}$ |
| item*region2 | twig, 2 | 1 | 0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | twig, 3 | 1 | 0.0001 | 121837.317 | 0.0000 | 1.0000 |
| item*region2 | twig, 4 | 0 | 25.3668 | 0.0000 | . | . |
| item*region2 | twig, 5 | 1 | 0.0001 | 153308.595 | 0.0000 | 1.0000 |
| item*region2 | twig, 6 | 1 | 0.0001 | 113225.901 | 0.0000 | 1.0000 |
| item*region2 | twig, 7 | 1 | 0.0001 | 177025.517 | 0.0000 | 1.0000 |
| item*region2 | twig, 8 | 1 | 0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | twig, 9 | 1 | 0.0001 | 125175.944 | 0.0000 | 1.0000 |
| item*region2 | twig, 10 | 1 | 0.0001 | 167941.152 | 0.0000 | 1.0000 |
| item*region2 | twig, 11 | 0 | 0.0000 | 0.0000 | . | . |
| scale | 0 | 1.00 | 0.0000 | . | . |  |

Truce terms by Island
Analysis Of Initial Parameter Estimates

| parameter |  | DF | Estimate | Std Err | ChiSquare | Pr>Chi |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0 | 0.00 | 0.0000 | . | . |  |
| item | bags | 1 | -2.5840 | 0.5185 | 24.8339 | 0.0001 |
| item | fans | 1 | -27.3653 | 0.3093 | 7826.7976 | 0.0001 |
| item | flix | 1 | -27.3653 | 0.4597 | 3542.9948 | 0.0001 |
| item | gate | 1 | -27.3653 | 0.3930 | 4847.4595 | 0.0001 |
| item | nibs | 1 | -1.2192 | 0.3157 | 14.9176 | 0.0001 |
| item | pegs | 1 | 0.4643 | 0.2721 | 2.9122 | 0.0879 |
| item | pois | 1 | -1.6740 | 0.3632 | 21.2377 | 0.0001 |
| item | quit | 1 | -4.0254 | 1.0089 | 15.9192 | 0.0001 |
| item | tags | 1 | -2.1401 | 0.4316 | 24.5867 | 0.0001 |
| item | twig | 1 | -27.3653 | 0.3698 | 5475.5357 | 0.0001 |
| item*island | bags, 1 | 1 | 1.4124 | 0.5731 | 6.0741 | $\mathbf{0 . 0 1 3 7}$ |
| item*island | bags, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*island | fans, 1 | 0 | 25.4558 | 0.0000 | . | . |
| item*island | fans ,2 | 0 | 0.0000 | 0.0000 | . | . |
| item*island | flix ,1 | 0 | 24.4974 | 0.0000 | . | . |
| item*island | flix, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*island | gate, 1 | 0 | 24.8569 | 0.0000 | . | . |
| item*island | gate, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*island | nibs, 1 | 1 | -26.1461 | 90795.2008 | 0.0000 | 0.9998 |
| item*island | nibs, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*island | pegs, 1 | 1 | -0.0048 | 0.3455 | 0.0002 | 0.9890 |
| item*island | pegs, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*island | pois, 1 | 1 | 1.1228 | 0.4223 | 7.0703 | $\mathbf{0 . 0 0 7 8}$ |
| item*island | pois, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*island | quit ,1 | 1 | 1.5169 | 1.0827 | 1.9628 | 0.1612 |
| item*island | quit, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*island | tags, 1 | 1 | -1.6776 | 0.8350 | 4.0365 | $\mathbf{0 . 0 4 4 5}$ |
| item*island | tags, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*island | twig, 1 | 0 | 25.0021 | 0.0000 | . | . |
| item*island | twig, 2 | 0 | 0.0000 | 0.0000 | . | . |
| scale | 0 | 1.00 | 0.0000 | . | . |  |
|  |  |  |  |  |  |  |

Truce terms by Catholic
Analysis Of Initial Parameter Estimates

| parameter | DF | Est. | Std Err | ChiSquare | Pr>Chi |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| intercept | 0 | 0.00 | 0.0000 | . | . |  |
| item | bags | 1 | -1.9459 | 0.7559 | 6.6265 | 0.0100 |
| item | fans | 1 | -1.0986 | 0.5774 | 3.6208 | 0.0571 |
| item | flix | 1 | -1.9459 | 0.7559 | 6.6265 | 0.0100 |
| item | gate | 1 | -24.3653 | 0.3885 | 3933.6226 | 0.0001 |
| item | nibs | 1 | -24.3653 | 0.3029 | 6471.4438 | 0.0001 |
| item | pegs | 1 | 1.0986 | 0.5774 | 3.6208 | 0.0571 |
| item | pois | 1 | -1.4663 | 0.6405 | 5.2410 | 0.0221 |
| item | quit | 1 | -2.7081 | 1.0328 | 6.8752 | 0.0087 |
| item | tags | 1 | -2.7081 | 1.0328 | 6.8752 | 0.0087 |
| item | twig | 1 | -2.7081 | 1.0328 | 6.8752 | 0.0087 |
| item* catholic | bags, 1 | 1 | 0.3993 | 0.7900 | 0.2554 | 0.6133 |
| item* catholic | bags, 2 | 0 | 0.0000 | 0.0000 |  |  |
| item* catholic | fans, 1 | 1 | -1.6341 | 0.6830 | 5.7247 | 0.0167 |
| item*catholic | fans, 2 | 0 | 0.0000 | 0.0000 | . |  |
| item* catholic | flix, 1 | 1 | -1.8075 | 0.9553 | 3.5801 | 0.0585 |
| item* catholic | flix, 2 | 0 | 0.0000 | 0.0000 | . |  |
| item*catholic | gate, 1 | 0 | 21.4909 | 0.0000 | . |  |
| item* catholic | gate, 2 | 0 | 0.0000 | 0.0000 |  |  |
| item*catholic | nibs, 1 | 0 | 22.0711 | 0.0000 | . | . |
| item*catholic | nibs, 2 | 0 | 0.0000 | 0.0000 | . |  |
| item* catholic | pegs, 1 | 1 | -0.6804 | 0.6043 | 1.2676 | 0.2602 |
| item* catholic | pegs, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*catholic | pois, 1 | 1 | 0.6444 | 0.6680 | 0.9304 | 0.3348 |
| item* catholic | pois, 2 | 0 | 0.0000 | 0.0000 |  |  |
| item*catholic | quit, 1 | 1 | -0.1663 | 1.1034 | 0.0227 | 0.8802 |
| item*catholic | quit, 2 | 0 | 0.0000 | 0.0000 |  |  |
| item*catholic | tags, 1 | 1 | -0.1663 | 1.1034 | 0.0227 | 0.8802 |
| item*catholic | tags, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item* catholic | twig, 1 | 1 | -0.1663 | 1.1034 | 0.0227 | 0.8802 |
| item*catholic | twig, 2 | 0 | 0.0000 | 0.0000 | . | . |
| scale | 0 | 1.00 | 0.0000 | . | . |  |

Truce terms by Urban/Rural
Analysis Of GEE Parameter Estimates - Empirical Standard Error Estimates Empirical 95\% Confidence Limits

| parameter |  | Est. | Std Err | Lower | Upper | Z | $\operatorname{Pr}>\|\mathrm{Z}\|$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| intercept | 0.0000 |  |  |  |  |  |  |
| item | bags | -1.3652 | 0.3234 | -1.9992 | -0.7313 | -4.221 | 0.0000 |
| item | fans | -1.7148 | 0.3621 | -2.4245 | -1.0051 | -4.736 | 0.0000 |
| item | flix | -2.9267 | 0.5926 | -4.0882 | -1.7652 | -4.939 | 0.0000 |
| item | gate | -2.1785 | 0.4307 | -3.0228 | -1.3343 | -5.058 | 0.0000 |
| item | nibs | -2.9267 | 0.5926 | -4.0882 | -1.7652 | -4.939 | 0.0000 |
| item | pegs | 0.2384 | 0.2622 | -0.2756 | 0.7524 | 0.9092 | 0.3633 |
| item | pois | -1.1676 | 0.3060 | -1.7674 | -0.5678 | -3.815 | 0.0001 |
| item | quit | -2.1785 | 0.4307 | -3.0228 | -1.3343 | -5.058 | 0.0000 |
| item | tags | -4.0604 | 1.0086 | -6.0372 | -2.0837 | -4.026 | 0.0001 |
| item | twig | -4.0604 | 1.0086 | -6.0372 | -2.0837 | -4.026 | 0.0001 |
| item*urb_rur | bags, 1 | -0.2724 | 0.4358 | -1.1265 | 0.5818 | -. 6250 | 0.5320 |
| item*urb_rur | bags, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| item*urb_rur | fans, 1 | -2.0229 | 0.8019 | -3.5945 | -0.4512 | -2.523 | 0.0116 |
| item*urb_rur | fans, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| item*urb_rur | flix, 1 | -0.8109 | 0.9290 | -2.6318 | 1.0099 | -. 8729 | 0.3827 |
| item*urb_rur | flix, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| item*urb_rur | gate, 1 | -2.2641 | 1.0942 | -4.4087 | -0.1195 | -2.069 | 0.0385 |
| item*urb_rur | gate, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| item*urb_rur | nibs, 1 | 0.8986 | 0.6814 | -0.4370 | 2.2342 | 1.3187 | 0.1873 |
| item*urb_rur | nibs, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| item*urb_rur | pegs, 1 | 0.4373 | 0.3476 | -0.2438 | 1.1185 | 1.2584 | 0.2083 |
| item*urb_rur | pegs, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| item*urb_rur | pois, 1 | 0.4918 | 0.3817 | -0.2562 | 1.2399 | 1.2887 | 0.1975 |
| item*urb_rur | pois, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| item*urb_rur | quit, 1 | -1.5591 | 0.8351 | -3.1960 | 0.0777 | -1.867 | 0.0619 |
| item*urb_rur | quit, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| item*urb_rur | tags, 1 | 1.6369 | 1.0829 | -0.4856 | 3.7594 | 1.5115 | 0.1307 |
| item*urb_rur | tags, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| item*urb_rur | twig, 1 | 1.4702 | 1.0938 | -0.6736 | 3.6140 | 1.3441 | 0.1789 |
| item*urb_rur | twig, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| scale | 1.0000 |  |  |  |  |  |  |

## Truce Terms in Northern Sub-Regions Only

Analysis Of Initial Parameter Estimates

| parameter |  | DF | Estimate | Std Err | ChiSquare | Pr $>$ Chi |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| intercept | 0 | 0.00 | 0.0000 |  |  |  |
| item | bags | 1 | -2.0369 | 0.6138 | 11.0105 | 0.0009 |
| item | fans | 1 | -27.3653 | 171718.740 | 0.0000 | 0.9999 |
| item | flix | 1 | -27.3653 | 1.0274 | 709.4465 | 0.0001 |
| item | gate | 1 | -3.2189 | 1.0198 | 9.9627 | 0.0016 |
| item | nibs | 1 | -27.3653 | 171718.740 | 0.0000 | 0.9999 |
| item | pegs | 1 | 0.8109 | 0.4249 | 3.6421 | 0.0563 |
| item | pois | 1 | -0.8109 | 0.4249 | 3.6421 | 0.0563 |
| item | quit | 1 | -2.4849 | 0.7360 | 11.3996 | 0.0007 |
| item | tags | 1 | -27.3653 | 0.8660 | 998.4801 | 0.0001 |
| item | twig | 1 | -0.9985 | 0.4421 | 5.1003 | 0.0239 |
| item*region2 | bags, 1 | 1 | 2.7300 | 1.0615 | 6.6143 | 0.0101 |
| item*region2 | bags, 2 | 1 | 1.3437 | 1.0615 | 1.6024 | 0.2056 |
| item*region2 | bags, 3 | 1 | 2.1422 | 0.7668 | 7.8058 | 0.0052 |
| item*region2 | bags, 4 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | fans, 1 | 1 | 0.0000 | 396567.444 | 0.0000 | 1.0000 |
| item*region2 | fans, 2 | 1 | 0.0000 | 396567.444 | 0.0000 | 1.0000 |
| item*region2 | fans, 3 | 1 | 0.0000 | 264269.565 | 0.0000 | 1.0000 |
| item*region2 | fans, 4 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | flix, 1 | 1 | -0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | flix, 2 | 1 | -0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | flix, 3 | 0 | 24.4749 | 0.0000 |  |  |
| item*region2 | flix, 4 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | gate, 1 | 1 | -24.1464 | 357461.063 | 0.0000 | 0.9999 |
| item*region2 | gate, 2 | 1 | -24.1464 | 357461.063 | 0.0000 | 0.9999 |
| item*region2 | gate, 3 | 1 | 2.4457 | 1.1330 | 4.6599 | 0.0309 |
| item*region2 | gate, 4 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | nibs, 1 | 1 | 0.0000 | 396567.444 | 0.0000 | 1.0000 |
| item*region2 | nibs, 2 | 1 | 0.0000 | 396567.444 | 0.0000 | 1.0000 |
| item*region2 | nibs, 3 | 1 | 0.0000 | 264269.565 | 0.0000 | 1.0000 |
| item*region2 | nibs, 4 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | pegs, 1 | 1 | 0.7985 | 1.1750 | 0.4619 | 0.4968 |
| item*region2 | pegs, 2 | 1 | -0.1178 | 0.9647 | 0.0149 | 0.9028 |
| item*region2 | pegs, 3 | 1 | -0.7056 | 0.6258 | 1.2711 | 0.2596 |
| item*region2 | pegs, 4 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | pois, 1 | 1 | 2.4204 | 1.1750 | 4.2434 | 0.0394 |
| item*region2 | pois, 2 | 1 | 0.1178 | 0.9647 | 0.0149 | 0.9028 |
| item*region2 | pois, 3 | 1 | 0.2719 | 0.6378 | 0.1818 | 0.6698 |
| item*region2 | pois, 4 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | quit, 1 | 1 | -24.8804 | 357461.063 | 0.0000 | 0.9999 |
| item*region2 | quit, 2 | 1 | -24.8804 | 357461.063 | 0.0000 | 0.9999 |
| item*region2 | quit, 3 | 1 | 1.4553 | 0.9017 | 2.6047 | 0.1065 |


| item*region2 | quit, 4 | 0 | 0.0000 | 0.0000 | . | . |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| item*region2 | tags, 1 | 1 | -0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | tags, 2 | 0 | 26.6722 | 0.0000 | . | . |
| item*region2 | tags, 3 | 1 | -0.0000 | 200875.776 | 0.0000 | 1.0000 |
| item*region2 | tags, 4 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | twig, 1 | 1 | -0.6109 | 1.1813 | 0.2674 | 0.6051 |
| item*region2 | twig, 2 | 1 | -26.3668 | 357461.063 | 0.0000 | 0.9999 |
| item*region2 | twig, 3 | 1 | -26.3668 | 200875.776 | 0.0000 | 0.9999 |
| item*region2 | twig, 4 | 0 | 0.0000 | 0.0000 | . | . |
| scale | 0 | 1.00 | 0.0000 | . | . |  |

Truce Terms in Central Sub-Regions Only
Analysis Of Initial Parameter Estimates

| parameter |  | DF | Estimate | Std Err | ChiSquare | Pr>Chi |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| item | bags | 1 | -2.1972 | 1.0541 | 4.3450 | 0.0371 |
| item | fans | 1 | -27.3653 | 0.4282 | 4084.6814 | 0.0001 |
| item | flix | 1 | -27.3651 | 0.5528 | 2450.7864 | 0.0001 |
| item | gate | 1 | -27.3653 | 276888.149 | 0.0000 | 0.9999 |
| item | nibs | 1 | -2.1972 | 1.0541 | 4.3450 | 0.0371 |
| item | pegs | 1 | 0.0000 | 0.6325 | 0.0000 | 1.0000 |
| item | pois | 1 | -1.3863 | 0.7906 | 3.0749 | 0.0795 |
| item | quit | 1 | -27.3653 | 1.0290 | 707.2569 | 0.0001 |
| item | tags | 1 | -27.3653 | 0.7071 | 1497.7191 | 0.0001 |
| item | twig | 1 | -27.3653 | 276888.149 | 0.0000 | 0.9999 |
| item*region2 | bags, 5 | 1 | 0.5878 | 1.3081 | 0.2019 | 0.6532 |
| item*region2 | bags, 6 | 1 | -0.8473 | 1.4693 | 0.3326 | 0.5642 |
| item*region2 | bags, 7 | 1 | 0.1178 | 1.4954 | 0.0062 | 0.9372 |
| item*region2 | bags, 8 | 1 | -25.1681 | 357461.063 | 0.0000 | 0.9999 |
| item*region2 | bags, 9 | 1 | 0.1178 | 1.2937 | 0.0083 | 0.9275 |
| item*region2 | bags, 10 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | fans, 5 | 1 | -0.0000 | 252763.142 | 0.0000 | 1.0000 |
| item*region2 | fans, 6 | 0 | 27.5476 | 0.0000 | . | . |
| item*region2 | fans, 7 | 1 | -0.0000 | 291865.736 | 0.0000 | 1.0000 |
| item*region2 | fans, 8 | 1 | -0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | fans, 9 | 1 | -0.0000 | 206380.241 | 0.0000 | 1.0000 |
| item*region2 | fans, 10 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | flix, 5 | 1 | -0.0002 | 252763.142 | 0.0000 | 1.0000 |
| item*region2 | flix, 6 | 0 | 25.8611 | 0.0000 | . | . |
| item*region2 | flix, 7 | 1 | -0.0002 | 291865.736 | 0.0000 | 1.0000 |
| item*region2 | flix, 8 | 1 | -0.0002 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | flix, 9 | 1 | -0.0002 | 206380.241 | 0.0000 | 1.0000 |
| item*region2 | flix, 10 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | gate, 5 | 1 | -0.0000 | 374908.326 | 0.0000 | 1.0000 |
| item*region2 | gate, 6 | 1 | -0.0000 | 333939.672 | 0.0000 | 1.0000 |
| item*region2 | gate, 7 | 1 | 0.0000 | 402309.153 | 0.0000 | 1.0000 |


| item*region2 | gate, 8 | 1 | 0.0000 | 452156.453 | 0.0000 | 1.0000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| item*region2 | gate, 9 | 1 | 0.0000 | 345340.196 | 0.0000 | 1.0000 |
| item*region2 | gate 10 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | nibs, 5 | 1 | -25.1681 | 252763.142 | 0.0000 | 0.9999 |
| item*region2 | nibs, 6 | 1 | -25.1681 | 186677.952 | 0.0000 | 0.9999 |
| item*region2 | nibs, 7 | 1 | -25.1681 | 291865.736 | 0.0000 | 0.9999 |
| item*region2 | nibs, 8 | 1 | -25.1681 | 357461.063 | 0.0000 | 0.9999 |
| item*region2 | nibs, 9 | 1 | -25.1681 | 206380.241 | 0.0000 | 0.9999 |
| item*region2 | nibs, 10 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | pegs, 5 | 1 | 2.3979 | 1.2210 | 3.8566 | 0.0495 |
| item*region2 | pegs, 6 | 1 | -0.5596 | 0.7723 | 0.5251 | 0.4687 |
| item*region2 | pegs, 7 | 1 | 0.2231 | 0.9220 | 0.0586 | 0.8088 |
| item*region2 | pegs, 8 | 1 | 1.6094 | 1.2649 | 1.6189 | 0.2032 |
| item*region2 | pegs, 9 | 1 | 2.8332 | 1.2078 | 5.5024 | 0.0190 |
| item*region2 | pegs, 10 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | pois, 5 | 1 | 2.4849 | 1.0341 | 5.7738 | 0.0163 |
| item*region2 | pois, 6 | 1 | -0.4595 | 1.0055 | 0.2089 | 0.6476 |
| item*region2 | pois, 7 | 1 | 0.1335 | 1.1260 | 0.0141 | 0.9056 |
| item*region2 | pois, 8 | 1 | -0.2231 | 1.3509 | 0.0273 | 0.8688 |
| item*region2 | pois, 9 | 1 | -0.6931 | 1.0897 | 0.4046 | 0.5247 |
| item*region2 | pois, 10 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | quit, 5 | 1 | -0.0000 | 252763.142 | 0.0000 | 1.0000 |
| item*region2 | quit, 6 | 1 | -0.0000 | 186677.952 | 0.0000 | 1.0000 |
| item*region2 | quit, 7 | 1 | -0.0000 | 291865.736 | 0.0000 | 1.0000 |
| item*region2 | quit, 8 | 1 | -0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | quit, 9 | 0 | 24.5321 | 0.0000 |  |  |
| item*region2 | quit, 10 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | tags, 5 | 1 | -0.0000 | 252763.142 | 0.0000 | 1.0000 |
| item*region2 | tags, 6 | 1 | -0.0000 | 186677.952 | 0.0000 | 1.0000 |
| item*region2 | tags, 7 | 0 | 28.0584 | 0.0000 |  |  |
| item*region2 | tags, 8 | 1 | -0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | tags, 9 | 1 | -0.0000 | 206380.241 | 0.0000 | 1.0000 |
| item*region2 | tags, 10 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | twig, 5 | 1 | -0.0000 | 374908.326 | 0.0000 | 1.0000 |
| item*region2 | twig, 6 | 1 | -0.0000 | 333939.672 | 0.0000 | 1.0000 |
| item*region2 | twig, 7 | 1 | 0.0000 | 402309.153 | 0.0000 | 1.0000 |
| item*region2 | twig, 8 | 1 | 0.0000 | 452156.453 | 0.0000 | 1.0000 |
| item*region2 | twig, 9 | 1 | 0.0000 | 345340.196 | 0.0000 | 1.0000 |
| item*region2 | twig, 10 | 0 | 0.0000 | 0.0000 |  |  |
| scale | 0 | 1.00 | 0.0000 |  |  |  |

## Truce Terms in North Island Sub-Regions Only

Analysis Of Initial Parameter Estimates

| parameter |  | DF | Estimate | Std Err | ChiSquare | Pr>Chi |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| intercept | 0 | 0.00 | 0.0000 | . | . |  |
| item | bags | 1 | -3.0445 | 1.0235 | 8.8478 | 0.0029 |
| item | fans | 1 | 0.1823 | 0.4282 | 0.1813 | 0.6702 |
| item | flix | 1 | -1.5041 | 0.5528 | 7.4037 | 0.0065 |
| item | gate | 1 | -27.3654 | 1.0198 | 720.0611 | 0.0001 |
| item | nibs | 1 | -27.3653 | 186677.952 | 0.0000 | 0.9999 |
| item | pegs | 1 | -0.5596 | 0.4432 | 1.5943 | 0.2067 |
| item | pois | 1 | -1.8458 | 0.6213 | 8.8274 | 0.0030 |
| item | quit | 1 | -27.3654 | 0.7360 | 1382.5230 | 0.0001 |
| item | tags | 1 | -27.3653 | 0.8660 | 998.4784 | 0.0001 |
| item | twig | 1 | -27.3653 | 0.4421 | 3830.6995 | 0.0001 |
| item*region2 | bags, 1 | 1 | 3.7377 | 1.3408 | 7.7715 | 0.0053 |
| item*region2 | bags, 2 | 1 | 2.3514 | 1.3408 | 3.0757 | 0.0795 |
| item*region2 | bags, 3 | 1 | 3.1499 | 1.1219 | 7.8824 | 0.0050 |
| item*region2 | bags, 4 | 1 | 1.0076 | 1.1935 | 0.7128 | 0.3985 |
| item*region2 | bags, 5 | 1 | 1.4351 | 1.2836 | 1.2500 | 0.2636 |
| item*region2 | bags, 6 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | fans, 1 | 1 | -27.5476 | 357461.063 | 0.0000 | 0.9999 |
| item*region2 | fans, 2 | 1 | -27.5476 | 357461.063 | 0.0000 | 0.9999 |
| item*region2 | fans, 3 | 1 | -27.5476 | 200875.776 | 0.0000 | 0.9999 |
| item*region2 | fans, 4 | 1 | -27.5476 | 171718.740 | 0.0000 | 0.9999 |
| item*region2 | fans, 5 | 1 | -27.5476 | 252763.142 | 0.0000 | 0.9999 |
| item*region2 | fans, 6 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | flix, 1 | 1 | -25.8612 | 357461.063 | 0.0000 | 0.9999 |
| item*region2 | flix, 2 | 1 | -25.8612 | 357461.063 | 0.0000 | 0.9999 |
| item*region2 | flix, 3 | 1 | -1.3863 | 1.1667 | 1.4119 | 0.2347 |
| item*region2 | flix, 4 | 1 | -25.8612 | 171718.740 | 0.0000 | 0.9999 |
| item*region2 | flix, 5 | 1 | -25.8612 | 252763.142 | 0.0000 | 0.9999 |
| item*region2 | flix, 6 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | gate, 1 | 1 | 0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | gate, 2 | 1 | 0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | gate, 3 | 1 | 26.5922 | 1.1330 | 550.9113 | 0.0001 |
| item*region2 | gate, 4 | 0 | 24.1465 | 0.0000 |  |  |
| item*region2 | gate, 5 | 1 | 0.0000 | 252763.142 | 0.0000 | 1.0000 |
| item*region2 | gate, 6 | 0 | 0.0000 | 0.0000 | . |  |
| item*region2 | nibs, 1 | 1 | -0.0000 | 403270.467 | 0.0000 | 1.0000 |
| item*region2 | nibs, 2 | 1 | -0.0000 | 403270.467 | 0.0000 | 1.0000 |
| item*region2 | nibs, 3 | 1 | -0.0000 | 274225.701 | 0.0000 | 1.0000 |
| item*region2 | nibs, 4 | 1 | -0.0000 | 253645.389 | 0.0000 | 1.0000 |
| item*region2 | nibs, 5 | 1 | -0.0000 | 314225.816 | 0.0000 | 1.0000 |
| item*region2 | nibs, 6 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | pegs, 1 | 1 | 2.1691 | 1.1817 | 3.3692 | 0.0664 |


| item*region2 | pegs 2 | 1 | 1.2528 | 0.9728 | 1.6582 | 0.1978 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| item*region2 | pegs, 3 | 1 | 0.6650 | 0.6384 | 1.0850 | 0.2976 |
| item*region2 | pegs, 4 | 1 | 1.3705 | 0.6140 | 4.9827 | $\mathbf{0 . 0 2 5 6}$ |
| item*region2 | pegs, 5 | 1 | 2.9575 | 1.1346 | 6.7945 | $\mathbf{0 . 0 0 9 1}$ |
| item*region2 | pegs, 6 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | pois, 1 | 1 | 3.4553 | 1.2594 | 7.5278 | $\mathbf{0 . 0 0 6 1}$ |
| item*region2 | pois, 2 | 1 | 1.1527 | 1.0658 | 1.1696 | 0.2795 |
| item*region2 | pois, 3 | 1 | 1.3068 | 0.7824 | 2.7898 | 0.0949 |
| item*region2 | pois, 4 | 1 | 1.0349 | 0.7527 | 1.8905 | 0.1691 |
| item*region2 | pois, 5 | 1 | 2.9444 | 0.9113 | 10.4403 | $\mathbf{0 . 0 0 1 2}$ |
| item*region2 | pois, 6 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | quit, 1 | 1 | 0.0001 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | quit 2 | 1 | 0.0001 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | quit, 3 | 1 | 26.3358 | 0.9017 | 853.0056 | $\mathbf{0 . 0 0 0 1}$ |
| item*region2 | quit, 4 | 0 | 24.8805 | 0.0000 | . | . |
| item*region2 | quit, 5 | 1 | 0.0001 | 252763.142 | 0.0000 | 1.0000 |
| item*region2 | quit, 6 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | tags, 1 | 1 | -0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | tags, 2 | 0 | 26.6721 | 0.0000 | . | . |
| item*region2 | tags, 3 | 1 | -0.0000 | 200875.776 | 0.0000 | 1.0000 |
| item*region2 | tags, 4 | 1 | -0.0000 | 171718.740 | 0.0000 | 1.0000 |
| item*region2 | tags, 5 | 1 | -0.0000 | 252763.142 | 0.0000 | 1.0000 |
| item*region2 | tags, 6 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | twig, 1 | 1 | 25.7558 | 1.1813 | 475.3628 | $\mathbf{0 . 0 0 0 1}$ |
| item*region2 | twig, 2 | 1 | -0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | twig, 3 | 1 | -0.0000 | 200875.776 | 0.0000 | 1.0000 |
| item*region2 | twig 4 | 0 | 26.3668 | 0.0000 | . | . |
| item*region2 | twig, 5 | 1 | -0.0000 | 252763.142 | 0.0000 | 1.0000 |
| item*region2 | twig 6 | 0 | 0.0000 | 0.0000 | . | . |
| scale | 0 | 1.00 | 0.0000 | . | . |  |

## Truce Terms in South Island Sub-Regions Only

Analysis Of Initial Parameter Estimates

| parameter |  | DF | Estimate | Std Err | ChiSquare | Pr $>$ Chi |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| intercept | 0 | 0.00 | 0.0000 |  |  |  |
| item | bags | 1 | -27.3653 | 1.0541 | 673.9760 | 0.0001 |
| item | fans | 1 | -27.3653 | 234013.197 | 0.0000 | 0.9999 |
| item | flix | 1 | -27.3653 | 234013.197 | 0.0000 | 0.9999 |
| item | gate | 1 | -27.3653 | 234013.197 | 0.0000 | 0.9999 |
| item | nibs | 1 | 1.7918 | 0.7638 | 5.5035 | 0.0190 |
| item | pegs | 1 | -1.2993 | 0.6513 | 3.9792 | 0.0461 |
| item | pois | 1 | -1.7918 | 0.7638 | 5.5035 | 0.0190 |
| item | quit | 1 | -27.3653 | 1.0290 | 707.2566 | 0.0001 |
| item | tags | 1 | -27.3653 | 0.7071 | 1497.7185 | 0.0001 |
| item | twig | 1 | -27.3653 | 234013.197 | 0.0000 | 0.9999 |
| item*region2 | bags, 7 | 1 | 25.2859 | 1.4954 | 285.9326 | 0.0001 |
| item*region2 | bags, 8 | 1 | 0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | bags, 9 | 1 | 25.2859 | 1.2937 | 382.0344 | 0.0001 |
| item*region2 | bags, 10 | 0 | 25.1681 | 0.0000 |  |  |
| item*region2 | bags, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | fans, 7 | 1 | 0.0000 | 374095.956 | 0.0000 | 1.0000 |
| item*region2 | fans, 8 | 1 | 0.0000 | 427247.689 | 0.0000 | 1.0000 |
| item*region2 | fans, 9 | 1 | 0.0000 | 312017.596 | 0.0000 | 1.0000 |
| item*region2 | fans, 10 | 1 | 0.0000 | 362531.686 | 0.0000 | 1.0000 |
| item*region2 | fans, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | flix, 7 | 1 | 0.0000 | 374095.956 | 0.0000 | 1.0000 |
| item*region2 | flix, 8 | 1 | 0.0000 | 427247.689 | 0.0000 | 1.0000 |
| item*region2 | flix, 9 | 1 | 0.0000 | 312017.596 | 0.0000 | 1.0000 |
| item*region2 | flix, 10 | 1 | 0.0000 | 362531.686 | 0.0000 | 1.0000 |
| item*region2 | flix, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | gate, 7 | 1 | 0.0000 | 374095.956 | 0.0000 | 1.0000 |
| item*region2 | gate, 8 | 1 | 0.0000 | 427247.689 | 0.0000 | 1.0000 |
| item*region2 | gate, 9 | 1 | 0.0000 | 312017.596 | 0.0000 | 1.0000 |
| item*region2 | gate, 10 | 1 | 0.0000 | 362531.686 | 0.0000 | 1.0000 |
| item*region2 | gate, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | nibs, 7 | 1 | -29.1571 | 291865.736 | 0.0000 | 0.9999 |
| item*region2 | nibs, 8 | 1 | -29.1571 | 357461.063 | 0.0000 | 0.9999 |
| item*region2 | nibs, 9 | 1 | -29.1571 | 206380.241 | 0.0000 | 0.9999 |
| item*region2 | nibs, 10 | 1 | -3.9890 | 1.3017 | 9.3907 | 0.0022 |
| item*region2 | nibs, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | pegs, 7 | 1 | 1.5224 | 0.9350 | 2.6512 | 0.1035 |
| item*region2 | pegs, 8 | 1 | 2.9087 | 1.2745 | 5.2090 | 0.0225 |
| item*region2 | pegs, 9 | 1 | 4.1325 | 1.2178 | 11.5150 | 0.0007 |
| item*region2 | pegs, 10 | 1 | 1.2993 | 0.9079 | 2.0481 | 0.1524 |
| item*region2 | pegs, 11 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | pois, 7 | 1 | 0.5390 | 1.1073 | 0.2369 | 0.6264 |


| item*region2 | pois, 8 | 1 | 0.1823 | 1.3354 | 0.0186 | 0.8914 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| item*region2 | pois, 9 | 1 | -0.2877 | 1.0704 | 0.0722 | 0.7881 |
| item*region2 | pois, 10 | 1 | 0.4055 | 1.0992 | 0.1361 | 0.7122 |
| item*region2 | pois, 11 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | quit, 7 | 1 | -0.0000 | 291865.736 | 0.0000 | 1.0000 |
| item*region2 | quit, 8 | 1 | -0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | quit, 9 | 0 | 24.5321 | 0.0000 | . | . |
| item*region2 | quit, 10 | 1 | -0.0000 | 276888.149 | 0.0000 | 1.0000 |
| item*region2 | quit, 11 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | tags, 7 | 0 | 28.0584 | 0.0000 | . | . |
| item*region2 | tags, 8 | 1 | -0.0000 | 357461.063 | 0.0000 | 1.0000 |
| item*region2 | tags, 9 | 1 | -0.0000 | 206380.241 | 0.0000 | 1.0000 |
| item*region2 | tags, 10 | 1 | -0.0000 | 276888.149 | 0.0000 | 1.0000 |
| item*region2 | tags 11 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | twig, 7 | 1 | 0.0000 | 374095.956 | 0.0000 | 1.0000 |
| item*region2 | twig, 8 | 1 | 0.0000 | 427247.689 | 0.0000 | 1.0000 |
| item*region2 | twig, 9 | 1 | 0.0000 | 312017.596 | 0.0000 | 1.0000 |
| item*region2 | twig, 10 | 1 | 0.0000 | 362531.686 | 0.0000 | 1.0000 |
| item*region2 | twig, 11 | 0 | 0.0000 | 0.0000 | . | . |
| scale | 0 | 1.00 | 0.0000 | . | . |  |

Truce Terms in Northern and Central Regions Only
Analysis Of Initial Parameter Estimates

| parameter |  | DF | Estimate | Std Err | ChiSquare | Pr>Chi |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0 | 0.00 | 0.0000 | . | . |  |
| item | bags | 1 | -2.3168 | 0.3962 | 34.2001 | 0.0001 |
| item | fans | 1 | -1.7047 | 0.3138 | 29.5088 | 0.0001 |
| item | flix | 1 | -2.9178 | 0.5133 | 32.3072 | 0.0001 |
| item | gate | 1 | -27.3653 | 0.4036 | 4598.2640 | 0.0001 |
| item | nibs | 1 | -4.3438 | 1.0065 | 18.6267 | 0.0001 |
| item | pegs | 1 | 0.6931 | 0.2402 | 8.3279 | 0.0039 |
| item | pois | 1 | -1.1331 | 0.2638 | 18.4521 | 0.0001 |
| item | quit | 1 | -4.3438 | 1.0065 | 18.6267 | 0.0001 |
| item | tags | 1 | -2.4849 | 0.4249 | 34.1987 | 0.0001 |
| item | twig | 1 | -27.3653 | 0.3813 | 5150.0551 | 0.0001 |
| item*region1 | bags, 1 | 1 | 1.6236 | 0.4857 | 11.1754 | $\mathbf{0 . 0 0 0 8}$ |
| item*region1 | bags, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | fans, 1 | 1 | -25.6606 | 115975.683 | 0.0000 | 0.9998 |
| item*region1 | fans, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | flix, 1 | 1 | -1.1076 | 1.1320 | 0.9574 | 0.3279 |
| item*region1 | flix, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | gate, 1 | 0 | 25.3992 | 0.0000 | . | . |
| item*region1 | gate, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | nibs, 1 | 1 | -23.0215 | 115975.683 | 0.0000 | 0.9998 |
| item*region1 | nibs, 2 | 0 | 0.0000 | 0.0000 | . | . |


| item*region1 | pegs, 1 | 1 | -0.0780 | 0.3670 | 0.0451 | 0.8318 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| item*region1 | pegs, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | pois, 1 | 1 | 0.6688 | 0.3790 | 3.1146 | 0.0776 |
| item*region1 | pois, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | quit, 1 | 1 | 2.3777 | 1.0844 | 4.8080 | $\mathbf{0 . 0 2 8 3}$ |
| item*region1 | quit, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | tags, 1 | 1 | -0.8293 | 0.8359 | 0.9842 | 0.3212 |
| item*region1 | tags, 2 | 0 | 0.0000 | 0.0000 | . | . |
| item*region1 | twig, 1 | 0 | 25.5529 | 0.0000 | . | . |
| item*region1 | twig, 2 | 0 | 0.0000 | 0.0000 | . | . |
| scale | 0 | 1.00 | 0.0000 | . | . |  |

Truce Terms in Sub-Regions Excluding Southland-Otago
Analysis Of Initial Parameter Estimates

| parameter |  | DF | Estimate | Std Err | ChiSquare | Pr>Chi |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0 | 0.00 | 0.0000 | . | . |  |
| item | bags | 1 | -2.1972 | 1.0541 | 4.3450 | 0.0371 |
| item | fans | 1 | -26.3653 | 0.4282 | 3791.6244 | 0.0001 |
| item | flix | 1 | -26.3653 | 0.5528 | 2274.9728 | 0.0001 |
| item | gate | 1 | -26.3655 | 1.0198 | 668.4024 | 0.0001 |
| item | nibs | 1 | -2.1972 | 1.0541 | 4.3450 | 0.0371 |
| item | pegs | 1 | 0.0000 | 0.6325 | 0.0000 | 1.0000 |
| item | pois | 1 | -1.3863 | 0.7906 | 3.0749 | 0.0795 |
| item | quit | 1 | -26.3655 | 1.0290 | 656.5215 | 0.0001 |
| item | tags | 1 | -26.3653 | 0.7071 | 1390.2534 | 0.0001 |
| item | twig | 1 | -26.3654 | 0.4421 | 3555.8775 | 0.0001 |
| item*region2 | bags, 1 | 1 | 2.8904 | 1.3642 | 4.4889 | 0.0341 |
| item*region2 | bags, 2 | 1 | 1.5041 | 1.3642 | 1.2155 | 0.2702 |
| item*region2 | bags, 3 | 1 | 2.3026 | 1.1499 | 4.0098 | $\mathbf{0 . 0 4 5 2}$ |
| item*region2 | bags, 4 | 1 | 0.1603 | 1.2198 | 0.0173 | 0.8954 |
| item*region2 | bags, 5 | 1 | 0.5878 | 1.3081 | 0.2019 | 0.6532 |
| item*region2 | bags, 6 | 1 | -0.8473 | 1.4693 | 0.3326 | 0.5642 |
| item*region2 | bags, 7 | 1 | 0.1178 | 1.4954 | 0.0062 | 0.9372 |
| item*region2 | bags, 8 | 1 | -24.1681 | 216811.094 | 0.0000 | 0.9999 |
| item*region2 | bags, 9 | 1 | 0.1178 | 1.2937 | 0.0083 | 0.9275 |
| item*region2 | bags, 10 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | fans, 1 | 1 | 0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | fans, 2 | 1 | 0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | fans, 3 | 1 | 0.0000 | 121837.317 | 0.0000 | 1.0000 |
| item*region2 | fans, 4 | 1 | 0.0000 | 104152.681 | 0.0000 | 1.0000 |
| item*region2 | fans, 5 | 1 | 0.0000 | 153308.595 | 0.0000 | 1.0000 |
| item*region2 | fans, 6 | 0 | 26.5477 | 0.0000 | . | . |
| item*region2 | fans, 7 | 1 | 0.0000 | 177025.517 | 0.0000 | 1.0000 |
| item*region2 | fans, 8 | 1 | 0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | fans, 9 | 1 | 0.0000 | 125175.944 | 0.0000 | 1.0000 |


| item*region2 | fans, 10 | 0 | 0.0000 | 0.0000 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| item*region2 | flix, 1 | 1 | 0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | flix, 2 | 1 | 0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | flix, 3 | 1 | 23.4750 | 1.1667 | 404.8704 | 0.0001 |
| item*region2 | flix, 4 | 1 | 0.0000 | 104152.681 | 0.0000 | 1.0000 |
| item*region2 | flix, 5 | 1 | 0.0000 | 153308.595 | 0.0000 | 1.0000 |
| item*region2 | flix, 6 | 0 | 24.8613 | 0.0000 |  |  |
| item*region2 | flix, 7 | 1 | 0.0000 | 177025.517 | 0.0000 | 1.0000 |
| item*region2 | flix, 8 | 1 | 0.0000 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | flix, 9 | 1 | 0.0000 | 125175.944 | 0.0000 | 1.0000 |
| item*region2 | flix, 10 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | gate, 1 | 1 | 0.0002 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | gate, 2 | 1 | 0.0002 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | gate, 3 | 1 | 25.5923 | 1.1330 | 510.2606 | 0.0001 |
| item*region2 | gate, 4 | 0 | 23.1466 | 0.0000 |  |  |
| item*region2 | gate, 5 | 1 | 0.0002 | 153308.595 | 0.0000 | 1.0000 |
| item*region2 | gate, 6 | 1 | 0.0002 | 113225.901 | 0.0000 | 1.0000 |
| item*region2 | gate, 7 | 1 | 0.0002 | 177025.517 | 0.0000 | 1.0000 |
| item*region2 | gate, 8 | 1 | 0.0002 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | gate, 9 | 1 | 0.0002 | 125175.944 | 0.0000 | 1.0000 |
| item*region2 | gate, 10 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | nibs, 1 | 1 | -24.1681 | 216811.094 | 0.0000 | 0.9999 |
| item*region2 | nibs, 2 | 1 | -24.1681 | 216811.094 | 0.0000 | 0.9999 |
| item*region2 | nibs, 3 | 1 | -24.1681 | 121837.317 | 0.0000 | 0.9998 |
| item*region2 | nibs, 4 | 1 | -24.1681 | 104152.681 | 0.0000 | 0.9998 |
| item*region2 | nibs, 5 | 1 | -24.1681 | 153308.595 | 0.0000 | 0.9999 |
| item*region2 | nibs, 6 | 1 | -24.1681 | 113225.901 | 0.0000 | 0.9998 |
| item*region2 | nibs, 7 | 1 | -24.1681 | 177025.517 | 0.0000 | 0.9999 |
| item*region2 | nibs, 8 | 1 | -24.1681 | 216811.094 | 0.0000 | 0.9999 |
| item*region2 | nibs, 9 | 1 | -24.1681 | 125175.944 | 0.0000 | 0.9998 |
| item*region2 | nibs, 10 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | pegs, 1 | 1 | 1.6094 | 1.2649 | 1.6189 | 0.2032 |
| item*region2 | pegs, 2 | 1 | 0.6931 | 1.0724 | 0.4178 | 0.5180 |
| item*region2 | pegs, 3 | 1 | 0.1054 | 0.7817 | 0.0182 | 0.8928 |
| item*region2 | pegs, 4 | 1 | 0.8109 | 0.7619 | 1.1327 | 0.2872 |
| item*region2 | pegs, 5 | 1 | 2.3979 | 1.2210 | 3.8566 | 0.0495 |
| item*region2 | pegs, 6 | 1 | -0.5596 | 0.7723 | 0.5251 | 0.4687 |
| item*region2 | pegs, 7 | 1 | 0.2231 | 0.9220 | 0.0586 | 0.8088 |
| item*region2 | pegs, 8 | 1 | 1.6094 | 1.2649 | 1.6189 | 0.2032 |
| item*region2 | pegs, 9 | 1 | 2.8332 | 1.2078 | 5.5024 | 0.0190 |
| item*region2 | pegs, 10 | 0 | 0.0000 | 0.0000 |  |  |
| item*region2 | pois, 1 | 1 | 2.9957 | 1.3509 | 4.9175 | 0.0266 |
| item*region2 | pois, 2 | 1 | 0.6931 | 1.1726 | 0.3494 | 0.5544 |
| item*region2 | pois, 3 | 1 | 0.8473 | 0.9226 | 0.8434 | 0.3584 |
| item*region2 | pois, 4 | 1 | 0.5754 | 0.8975 | 0.4110 | 0.5215 |


| item*region2 | pois, 5 | 1 | 2.4849 | 1.0341 | 5.7738 | $\mathbf{0 . 0 1 6 3}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| item*region2 | pois, 6 | 1 | -0.4595 | 1.0055 | 0.2089 | 0.6476 |
| item*region2 | pois, 7 | 1 | 0.1335 | 1.1260 | 0.0141 | 0.9056 |
| item*region2 | pois, 8 | 1 | -0.2231 | 1.3509 | 0.0273 | 0.8688 |
| item*region2 | pois, 9 | 1 | -0.6931 | 1.0897 | 0.4046 | 0.5247 |
| item*region2 | pois, 10 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | quit, 1 | 1 | 0.0002 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | quit, 2 | 1 | 0.0002 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | quit, 3 | 1 | 25.3359 | 1.1534 | 482.5459 | $\mathbf{0 . 0 0 0 1}$ |
| item*region2 | quit, 4 | 1 | 23.8806 | 1.2651 | 356.3180 | $\mathbf{0 . 0 0 0 1}$ |
| item*region2 | quit, 5 | 1 | 0.0002 | 153308.595 | 0.0000 | 1.0000 |
| item*region2 | quit, 6 | 1 | 0.0002 | 113225.901 | 0.0000 | 1.0000 |
| item*region2 | quit, 7 | 1 | 0.0002 | 177025.517 | 0.0000 | 1.0000 |
| item*region2 | quit, 8 | 1 | 0.0002 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | quit, 9 | 0 | 23.5323 | 0.0000 | . | . |
| item*region2 | quit, 10 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | tags, 1 | 1 | -0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | tags, 2 | 1 | 25.6721 | 1.1180 | 527.2457 | $\mathbf{0 . 0 0 0 1}$ |
| item*region2 | tags, 3 | 1 | -0.0001 | 121837.317 | 0.0000 | 1.0000 |
| item*region2 | tags, 4 | 1 | -0.0001 | 104152.681 | 0.0000 | 1.0000 |
| item*region2 | tags, 5 | 1 | -0.0001 | 153308.595 | 0.0000 | 1.0000 |
| item*region2 | tags, 6 | 1 | -0.0001 | 11325.901 | 0.0000 | 1.0000 |
| item*region2 | tags, 7 | 0 | 27.0584 | 0.0000 | . | . |
| item*region2 | tags, 8 | 1 | -0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | tags, 9 | 1 | -0.0001 | 125175.944 | 0.0000 | 1.0000 |
| item*region2 | tags, 10 | 0 | 0.0000 | 0.0000 | . | . |
| item*region2 | twig, 1 | 1 | 24.7560 | 1.1813 | 439.1704 | $\mathbf{0 . 0 0 0 1}$ |
| item*region2 | twig, 2 | 1 | 0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | twig, 3 | 1 | 0.0001 | 121837.317 | 0.0000 | 1.0000 |
| item*region2 | twig, 4 | 0 | 25.3669 | 0.0000 | . | . |
| item*region2 | twig, 5 | 1 | 0.0001 | 153308.595 | 0.0000 | 1.0000 |
| item*region2 | twig, 6 | 1 | 0.0001 | 113225.901 | 0.0000 | 1.0000 |
| item*region2 | twig, 7 | 1 | 0.0001 | 177025.517 | 0.0000 | 1.0000 |
| item*region2 | twig, 8 | 1 | 0.0001 | 216811.094 | 0.0000 | 1.0000 |
| item*region2 | twig, 9 | 1 | 0.0001 | 125175.944 | 0.0000 | 1.0000 |
| item*region2 | twig, 10 | 0 | 0.0000 | 0.0000 | . | . |
| scale | 0 | 1.00 | 0.0000 | . | . |  |
|  |  |  |  |  |  |  |

## Fans only: Further investigations

## Fans by Decile

(Don't know why this figure isn't the same as when it did all the terms!! The figures for Catholic and U/R were the same!)
Analysis Of GEE Parameter Estimates - Empirical 95\% Confidence Limits Empirical Standard Error Estimates

| parameter |  | Estimate | Std Err | Lower | Upper | Z | $\operatorname{Pr}>\|\mathrm{Z}\|$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0.0000 | . | . | . | . | . |  |
| item | fans | -4.6952 | 1.2442 | -7.1339 | -2.2566 | -3.774 | 0.0002 |
| decile*item | fans | 0.3336 | 0.1572 | 0.0255 | 0.6417 | 2.1220 | $\mathbf{0 . 0 3 3 8}$ |
| scale | 1.0443 | . | . | . | . | . |  |

Fans by Decile in Sub-Region 6 only
Analysis Of GEE Parameter Estimates - Empirical 95\% Confidence Limits
Empirical Standard Error Estimates

| parameter |  | Estimate | Std Err | Lower | Upper | Z | $\operatorname{Pr}>\|\mathrm{Z}\|$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0.0000 | . | . | . | . | . |  |
| item | fans | -1.3583 | 1.2656 | -3.8389 | 1.1223 | -1.073 | 0.2832 |
| decile*item | fans | 0.2213 | 0.1694 | -0.1107 | 0.5532 | 1.3065 | 0.1914 |
| scale | 1.0012 | . | . | . | . | . |  |

Fans by Catholic in Sub-Region 6 only
Analysis Of Initial Parameter Estimates

| parameter |  | DF | Estimate | Std Err | ChiSquare | Pr>Chi |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0 | 0.00, | 0.0000 | . | . |  |
| item | fans | 1 | 26.3653 | 0.4859 | 2944.0826 | 0.0001 |
| item $^{*}$ catholic | fans, 1 | 0 | -26.4831 | 0.0000 | . | . |
| item* catholic | fans, 2 | 0 | 0.0000 | 0.0000 | . | . |
| scale | 0 | 1.00, | 0.0000 | . | . |  |

Fans by Urban/Rural in Sub-Region 6 only
Analysis Of GEE Parameter Estimates - Empirical 95\% Confidence Limits Empirical Standard Error Estimates

| parameter |  | Estimate | Std Err | Lower | Upper | Z | Pr $>\|\mathrm{Z}\|$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0.0000 | . | . | . | . | . |  |
| item | fans | 0.2513 | 0.5040 | -0.7364 | 1.2390 | 0.4987 | 0.6180 |
| item*urb_rur | fans, 1 | -0.6568 | 1.0427 | -2.7005 | 1.3869 | -.6299 | 0.5288 |
| item*urb_rur | fans, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| scale | 1.0000 | . | . | . | . | . |  |

Fans by Decile and Catholic (whole country), Model 2 (no sig. figs. Model 1)
Analysis Of GEE Parameter Estimates - Empirical 95\% Confidence Limits Empirical Standard Error Estimates

| parameter |  | Estimate | Std Err | Lower | Upper | Z | $\operatorname{Pr}>\|\mathrm{Z}\|$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0.0000 | . | . | . | . | . |  |
| item | fans | -3.5411 | 1.4141 | -6.3127 | -0.7696 | -2.504 | 0.0123 |
| decile* $^{*}$ item | fans | 0.3446 | 0.1817 | -0.0115 | 0.7007 | 1.8968 | 0.0579 |
| item* catholic | fans, 1 | -1.5017 | 0.7081 | -2.8896 | -0.1138 | -2.121 | $\mathbf{0 . 0 3 3 9}$ |
| item* catholic | fans, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| scale | 1.1108 | . | . | . | . | . |  |

Fans by Decile and Urban/Rural (whole country), Model 2 (no sig. figs. Model 1)

Analysis Of GEE Parameter Estimates - Empirical 95\% Confidence Limits Empirical Standard Error Estimates

| parameter |  | Estimate | Std Err | Lower | Upper | Z | Pr>\|Z| |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0.0000 | . | . | . | . | . |  |
| item | fans | -3.3661 | 1.0850 | -5.4928 | -1.2395 | -3.102 | 0.0019 |
| decile*item | fans | 0.2340 | 0.1378 | -0.0361 | 0.5041 | 1.6981 | 0.0895 |
| item*urb_rur | fans, 1 | -1.7718 | 0.7827 | -3.3059 | -0.2377 | -2.264 | $\mathbf{0 . 0 2 3 6}$ |
| item*urb_rur | fans, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| scale | 1.0651 | . | . | . | . | . |  |

Fans by Catholic and Urban/Rural (whole c'ntry), Model 2 (no sig. figs. Md1 1)
Analysis Of GEE Parameter Estimates - Empirical 95\% Confidence Limits
Empirical Standard Error Estimates

| parameter |  | Estimate | Std Err | Lower | Upper | Z | $\operatorname{Pr}>\|\mathrm{Z}\|$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| intercept | 0.0000 | . | . | . | . | . |  |
| item | fans | -0.7016 | 0.6022 | -1.8819 | 0.4788 | -1.165 | 0.2440 |
| item*catholic | fans, 1 | -1.3006 | 0.6936 | -2.6601 | 0.0589 | -1.875 | 0.0608 |
| item*catholic | fans, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| item*urb_rur | fans, 1 | -1.8733 | 0.8013 | -3.4438 | -0.3028 | -2.338 | $\mathbf{0 . 0 1 9 4}$ |
| item*urb_rur | fans, 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| scale | 1.0360 | . | . | . | . | . |  |

