**A TWELVE-OPTION MBC\* BALLOT**

***Dublin North West Area Partnership, Meeting Local Needs***

***13th July, 2015***

***A ballot analysis conducted by the de Borda Institute, www.deborda.org***

\* MBC = modified Borda count

\* \* \* \* \*

**1 Introduction**

As can be seen from the ballot paper shown in the annex to this report, there were six proposals for a new name and two suggestions on a strapline. In total, therefore, there were the 12 options listed. 20 persons were eligible to vote; they all did so and, as described below, a consensus was identified and a decision was taken.

On complex issues, it is generally recommended that the maximum number of options should be 6. In this instance, the subject was not too complicated, and because the options fell into a pattern, it was decided to have a 12-option ballot, so that each and every idea could be treated fairly.

When there are less than 10 options on a ballot, voters are normally asked to given preferences to all of the options listed. When there are more than 10, voters are usually called on to list just 6 preferences. Taken together, these guidelines tend to cater for an inclusive debate.

It was agreed that no decision would be taken unless it achieved a consensus coefficient, cc, (see below) of at least 0.6.

**2 The Vote**

All the voters cast full ballots – i.e., they all listed a full slate of 6 preferences – so every 1st preference got 6 points, the 2nd preferences got 5, and so on. Furthermore, every vote was valid. So each voter exercised a total of (6 + 5 + 4 + 3 + 2 + 1 =) 21 points, giving a total of (20 x 21 =) 420 points. In the count, every option received some support, so every option got a score.

**3 Consensus Coefficient**

The consensus coefficient of any one option is a measure (i) of how much support that option has, and (ii) of the degree to which every voter has participated in the decision-making process. In ordinary two-option ballots, as in Danish referendums, the option which wins majority support is enacted only if the turn-out is at least 40 per cent. With an mbc, this double principle – that a democratic decision must enjoy sufficient support *and* participation - is governed by just the one measure, the cc.

For any one option, option ***A*** for example, its cc, C***A***, is defined as its score divided by the maximum possible score. ***A*** got 40 points; the maximum possible score would be 20 times 1st preferences as exercised in full ballots, which would be (20 x 6 =) 120 points. 40 divided by 120 is 0.33, so C***A*** = 0.33.

**4 The Result**

The full results are as shown in Table 1.

**Table 1 The Results**

|  |  |  |
| --- | --- | --- |
| Option | mbcscore | cc |
| ***A*** | 40 | 0.33 |
| ***B*** | 52 | 0.43 |
| ***C*** | 53 | 0.44 |
| ***D*** | 63 | 0.53 |
| ***E*** | 69 | 0.58 |
| ***F*** | 65 | 0.54 |
| ***G*** | 22 | 0.18 |
| ***H*** | 28 | 0.23 |
| ***I*** | 8 | 0.07 |
| ***J*** | 5 | 0.04 |
| ***K*** | 8 | 0.07 |
| ***L*** | 7 | 0.06 |
| Total | 420 |  |

**5 The Winner**

The winning option is ***E***, with an mbc score of 69 giving a cc of 0.58. The runner-up is option ***F***, with a cc of 0.54. There is obviously a lot of common ground between ***E*** and ***F***, so the outcome is a composite of the two.

**6 A Composite**

When assessing the consensus coefficient of a composite, the chair or consensor(s) must decide to what extent the two options, in this case, ***E*** and ***F***, share a commonality. In this instance, the share was estimated to be 2/3.

C***E*** is the consensus coefficient of option ***E***, and it is 0.58;

C***F*** is the consensus coefficient of option ***F***, which is 0.54; and

C***E/F*** is the consensus coefficient of the ***E/F*** composite,

C***E/F*** is C***E*** plus C***F***'s share of consensus of the rest, (1 - C***E***)

C***E/F*** =  C***E*** + 2/3{C***F*** x (1 - C***E***)}

   =   0.58  + 2/3{0.54 x (1 - 0.58)}

 = 0.58 + 2/3(0.54 x 0.42)

 = 0.58 + 2/3 x 0.23

 = 0.58 + 0.14

 =  0.72

**7 The Outcome**

Given that the result, C***E/F***, achieved a cc greater than 0.6, this outcome was enacted. The new name is therefore: *Dublin North West Area Partnership, Meeting Local Needs*

**8 An Analysis**

The voters’ profile is shown in Table 2.

**Table 2 The Voters’ Profile**

|  |  |
| --- | --- |
|  | Number of preferences cast |
| Option | 1st | 2nd | 3rd | 4th | 5th | 6th |
| ***A*** | 1 | 5 | - | 2 | 1 | 1 |
| ***B*** | 6 | 1 | 2 | - | 1 | 1 |
| ***C*** | 2 | 2 | 3 | 3 | 3 | 3 |
| ***D*** | 2 | 2 | 4 | 3 | 2 | 1 |
| ***E*** | 3 | 5 | 4 | 2 | 1 | 2 |
| ***F*** | 3 | 4 | 3 | 4 | 1 | 1 |
| ***G*** | 1 | - | 2 | 1 | 1 | 3 |
| ***H*** | 2 | 1 | - | 2 | 2 | 1 |
| ***I*** | - | - | 1 | - | 2 | - |
| ***J*** | - | - | - | 1 | - | 2 |
| ***K*** | - | - | - | - | 3 | 2 |
| ***L*** | - | - | - | - | 2 | 3 |

In a plurality vote, only the 1st preferences are counted, so the winning option would have been option ***B*** (on a score of 6) while option ***E*** would have been joint 2nd on a score of 3, along with option ***F***. Yet ***B*** was only the 5th most popular option overall {as measured by an mbc; for while option ***B*** got 6 1st preferences, as seen in Table 2, it got not much else, whereas option ***E*** had a good number of 2nd and 3rd preferences, (some of which came from persons who had given option ***B*** a 1st preference)}. A plurality vote, then, can be inaccurate.

In a two-round system, trs, the second round would have been between option ***B*** and either ***E*** or ***F***, in which case the answer would have been either ***E*** or ***F***, depending on which one of the latter pair was selected for the second round ballot against option ***B***. {This is one obvious disadvantage of trs, and draws can happen quite often with such a small electorate. The same is true of the capricious alternative vote, av, otherwise known as the single transferable vote, stv, which is a series of (inaccurate) plurality votes.}

Approval voting gives a draw for options ***C, D*** and ***E***, (but approval voting does not acknowledge preferences, it only counts ‘approvals’, so casting a full ballot has the same effect as giving a 1st preference, or a 6th preference for that matter, to *every* option, i.e., it is a wasted vote; approval voting is not an inclusive methodology).

A Condorcet count and an mbc are the two methodologies which not only allow the voter to submit a full ballot – in this instance, 6 preferences – but which also (unlike av/stv) take all preferences cast into account. These two types of count, therefore, have the potential to be accurate measures of any set of voters’ common ground. Little wonder, then, as shown in Table 3, that both give exactly the same social choice, and very similar social rankings.

{In a similar fashion, the team which wins the championship, if and when such success depends on the number of matches won (Condorcet), is probably the same as the victor when the cup is based on the best goal difference (Borda). In contrast, in any majority vote contest – the equivalent of a binary knock-out competition – much depends on the luck of the draw.}

**Table 3 The mbc and Condorcet rankings**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ranking | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th | 11th | 12th |
| mbc | ***E*** | ***F*** | ***D*** | ***C*** | ***B*** | ***A*** | ***H*** | ***G*** | ***I*** and ***K*** | ***J*** and ***L*** |
| Condorcet | ***E*** | ***F*** | ***D*** | ***C*** | ***B*** | ***A*** | ***H*** | ***G*** | ***K*** | ***L*** | ***I*** | ***J*** |

It is also interesting to analyse the two competing composites, as shown in Table 4, and of the two leading possible composites, it is clear that C***E/F*** has more overall support than C***A/B***.

**Table 4 The Composite Profiles**

|  |  |
| --- | --- |
|  | Number of preferences cast |
| Composite | 1st | 2nd | 3rd | 4th | 5th | 6th |
| ***A/B*** | 7 | 6 | 2 | 2 | 2 | 2 |
| ***E/F*** | 6 | 9 | 7 | 6 | 2 | 3 |

**9 Conclusion**

Of the two methodologies, the mbc and Condorcet, the former is non-majoritarian and may be regarded, therefore, as more inclusive.

**10 Recommendation**

As shown in this case and on many other occasions – see [www.deborda.org](http://www.deborda.org) – the mbc can be an accurate measure of any given electorate’s collective will. This voting procedure can be used both in decision-making, to identify the social choice, and/or in prioritizations, to identify a social ranking. It can also be used in public opinion polls.

As was demonstrated in 2013 by Dublin City Council,[[1]](#footnote-1) the mbc can, could and should be used in the democratically elected chamber, if and when there are more than two options ‘on the table’. Further-more, in a plural society and a pluralistic democracy, on any contentious dispute, there should invariably be a plurality of policy options under discussion.

The procedure is simple enough:

1. The gathering concerned elects a chair and a team of consensors,[[2]](#footnote-2) the former to guide, the latter to facilitate the discussions. This they do by forming and up-dating a list of the options ‘on the table’ (and computer screen).
2. Every party to the debate is entitled to propose a policy option, but each proposal must be a complete package.
3. If after extensive debate a verbal consensus proves to be elusive, the chair may call for a preference vote. The consensors’ (short) list, if approved by the participants, then becomes the mbc ballot paper.
4. The consensors display the voters’ profile, the results and, subject to the cc threshold,[[3]](#footnote-3) the outcome.

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**ANNEX**

**A NEW NAME FOR THE TOLKA AREA PARTNERSHIP**

**A modified Borda count, mbc, SIX-option ballot.**

Please choose up to six of the options listed.

Place a ‘1’ opposite your 1st preference;

you may also place a ‘2’ opposite your 2nd preference,

a ‘3’ opposite your 3rd preference,

a ‘4’ opposite your 4th preference,

 a ‘5’ opposite your 5th preference,

and a ‘6’ opposite your 6th preference,

|  |  |
| --- | --- |
| **T H E 12 O P T I O N S** | Yourpreferences |
|  | **COMPANY NAME** | **STRAPLINE** |  |
| *A* | Tolka Area Partnership | Meeting Local Needs |  |
| *B* | Tolka Area Partnership | Serving the Communities of Dublin North West  |  |
| *C* | North West Area Partnership | Meeting Local Needs |  |
| *D* | North West Area Partnership | Serving the Communities of Dublin North West  |  |
| *E* | Dublin North West Area Partnership | Meeting Local Needs |  |
| *F* | Dublin North West Area Partnership | Serving the Communities of Dublin North West  |  |
| *G* | The Area Partnership | Meeting Local Needs |  |
| *H* | The Area Partnership | Serving the Communities of Dublin North West  |  |
| *I* | Tolka Area Local Development Company | Meeting Local Needs |  |
| *J* | Tolka Area Local Development Company | Serving the Communities of Dublin North West  |  |
| *K* | Dublin 7,9,11 Partnership | Meeting Local Needs |  |
| *L* | Dublin 7,9,11 Partnership | Serving the Communities of Dublin North West  |  |

The mbc is a preferential points voting system in which the option

with the most points is the winner.

The points may vary as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| If you cast preferences for: | 1 name | 2 names | 3 names | 4 names | 5 names | 6 names |
| your 1st preference gets | 1 pt | 2 pts | 3 pts | 4 pts | 5 pts | 6 pts |
| your 2nd preference gets | - | 1 pt | 2 pts | 3 pts | 4 pts | 5 pts |
| your 3rd preference gets | - | - | 1 pt | 2 pts | 3 pts | 4 pts |
| your 4th preference gets | - | - | - | 1 pt | 2 pts | 3 pts |
| your 5th preference gets | - | - | - | - | 1 pt | 2 pts |
| your 6th preference gets | - | - | - | - | - | 1 pt |

Every name will get a score, its total number of points. That total will then be divided by the maximum possible total, to get its consensus coefficient. If every voter gives a hypothetical option, option **W**, a 1st preference, then **W** would get a consensus coefficient of 1.0. If another name, option **X**, got no preferences at all, and therefore no points, it would get a consensus coefficient of 0.0.

The name with the highest number of points and the highest consensus coefficient will be the most popular. It will be adopted if it gets a consensus coefficient of more than 0.6.

1. Baker, John. (2014). [*Dublin City Council's Rosie Hackett Bridge: A landmark in Decision-Making*](http://www.deborda.org/storage/Report%20on%20Rosie%20Hackett%20decision-final2.pdf)*,* 2014. The de Borda Institute. <http://www.deborda.org/publications/> [↑](#footnote-ref-1)
2. Emerson, Peter. (2012). *Defining Democracy*. Springer, Heidelberg and New York. [↑](#footnote-ref-2)
3. If the participants’ most popular choice does not pass the pre-determined cc threshold, the debate shall be resumed. The mbc will not identify a consensus if there isn’t one. [↑](#footnote-ref-3)