Thanks for your query. I attach a paper of my own dealing with constituency boundary revision in Ireland, but with some comparative material. It’s very hard to find systematic cross-national analyses of the kind you need, but the following are some examples of how regional-level constituencies are devised in countries bearing some similarities to the Welsh case. The first four illustrate the more-or-less easily manageable system under proportional representation. The fifth (Germany) already takes us into difficult terrain by requiring the coexistence of single-member constituencies which must either match, or not match, each other—with (rectifiable) problems either way.

(1) Catalonia: provinces form the basis for elections to the Catalan Parliament, and also for elections to the Spanish Cortes. Using the party list system, the four provinces of Barcelona, Girona, Lleida and Taragona return respectively 31, 6, 4 and 6 deputies to the Cortes and 85, 17, 15 and 18 to the Catalan Parliament. Other Spanish regions (“autonomous communities”) follow a similar approach.

(2) Wallonia: as in the Catalan case, provinces form the basis for elections at both levels. Thus the provinces of Hainaut, Liege, Luxemburg, Namur and (Francophone) Brabant return respectively 18, 15, 4, 6 and 5 members to the Belgian Chamber of Deputies using the party list system, and 28, 23, 5, 11 and 6 to the Walloon Regional Parliament in the same way. The same procedure is followed on the Flemish side.

(3) South Tyrol: in the autonomous province of South Tyrol, the 35 representatives of the Landtag are elected from province-wide lists, but in elections to the Italian Chamber of Deputies South Tyrol is grouped with the autonomous province of Trentino to form the region of Trentino-Alto Adige, which returned 12 deputies to the Chamber of Deputies in 2013 (the number of deputies allocated varies, depending on turnout).

(4) Aland Islands: in the autonomous province of Aland, the 30 representatives of the Lagting are elected in a single constituency by the party list system; the islands comprise a single one-member constituency for purposes of elections to the Finnish parliament.

(5) Germany: this is most similar to Wales, in that (alongside seats distributed between party lists) it is divided at national level into 299 single-member constituencies using the plurality system; but these do not correspond to the single-member constituencies at Land level. Thus, North Rhine-Westphalia is divided into 128 constituencies for Landtag elections, but to only 64 for Bundestag elections; Lower Saxony into 87 and 30 respectively; and Schleswig-Holstein into 44 and 11 respectively. It may be that the single-member Bundestag constituencies are formed by merging Landtag constituencies, but obviously the two types of constituencies cannot correspond (unlike the original position in Wales, where Westminster and Welsh National Assembly constituencies matched each other).

I hope that that helps. I would also volunteer the following observations about the most obvious options. These may not all be realistic in respect of what is legally and constitutionally possible; I list them in inverse order of personal preference.

(1) “freeze” constituencies as they are: this would be straightforward, but would create problems of equality of representation in time, though there would be some scope for correcting this at regional level

(2) follow the revisions at Westminster level: this would painlessly ensure respect for the population equality principle, and the overall size of the Assembly could be maintained by “corrections” at regional level; but it would mean that the Assembly is handing over to another body an element of its own internal constitution

(3) devise a separate set of constituencies using basic statistical population units, and revise this periodically (this would be a troublesome exercise parallel to that operating at Westminster level).

(4) drop the current system entirely, and rely on conventional list or STV systems of proportional representation to elect the Assembly.

The last is a radical suggestion, and reflects my own lack of enthusiasm for the German system, notwithstanding its growing popularity. This was essentially the outcome of a clash between conventional European notions of democracy as requiring PR, and a culturally based (or even ideologically driven) British-American preoccupation with single-member districts. There may have been a point to this in post-war Germany (though I am sceptical); it is more difficult to justify this system today, except on the basis of cultural expectations.

Incidentally, on the question of overlapping versus cross-cutting UK and Welsh constituencies, it may be worth pointing out that under the Local Government (Ireland) Act, 1898, a conscious effort was made to ensure that the boundaries of new local electoral areas for county council elections would cut across those of rural district councils to minimise confusion between the two systems!