

## ERRATUM TO: LINKING ITEM RESPONSE MODEL PARAMETERS

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The following argument should have been added to the proof of Theorem 3 to show that the linking function  $\boldsymbol{\xi}^* = \varphi(\boldsymbol{\xi})$  has to be separable in the components of  $\boldsymbol{\xi}$ : as the linking problem is symmetric in  $\boldsymbol{\xi}^*$  and  $\boldsymbol{\xi}, \varphi$  has to be bijective (i.e., has an inverse that returns the same unique  $\boldsymbol{\xi}$  from which the linking departs). In addition, to allow for the fact that the two calibrations may yield the same value for some of the parameters,  $\varphi$  should always be able to return  $\boldsymbol{\xi}_j^* = \boldsymbol{\xi}_j, j = 1, \dots, d$ , for all values of  $\boldsymbol{\xi}$ . The separable form of  $\varphi(\boldsymbol{\xi})$  in (31) does have both properties: each of its component functions is monotone and thus has an inverse, while the identity function is a special case of a monotone function. Now, if  $\varphi(\boldsymbol{\xi})$  would not be separable in its components, it would hold that  $\boldsymbol{\xi}_j^* = \varphi_j(\boldsymbol{\xi}_1, \dots, \boldsymbol{\xi}_d)$  for some  $j = 1, \dots, d$ . However,  $\boldsymbol{\xi}_j^* = \varphi_j(\boldsymbol{\xi}_1, \dots, \boldsymbol{\xi}_d)$  is only able to always return  $\varphi_j(\boldsymbol{\xi}_1, \dots, \boldsymbol{\xi}_j, \dots, \boldsymbol{\xi}_d) = \boldsymbol{\xi}_j$  when it is independent of  $(\boldsymbol{\xi}_1, \dots, \boldsymbol{\xi}_{j-1}, \boldsymbol{\xi}_{j+1}, \dots, \boldsymbol{\xi}_d)$ , that is, does not vary as a function of any of the other parameters. It follows that  $\boldsymbol{\xi}^* = \varphi(\boldsymbol{\xi})$  has to be separable in its components.

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