Methods of computing the factor content of trade using the international input-output model

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Computing the factor content of trade is important when testing Heckscher-Vanek-Ohlin theory. In existing studies, methods based on the international input-output model mainly refer to Deardorffâ€™s â€œactualâ€• factor content of trade. These methods are plausible, but suffer from the problem of double counting. Thus, the first contribution of this paper is to propose method of computing the â€œactualâ€• factor content of trade that resolves the problem of double counting. Deardorff also proposes a definition called â€œdomesticâ€• factor content of trade, but shows that this definition is implausible in terms of generalization and application. Therefore, as the second contribution, we revise the definition of Deardorffâ€™s â€œdomesticâ€• factor content of trade, and propose an appropriate computation method, then prove that the new definition and the method have ideal property for generalization and application. The differences between the actual and domestic factor contents of trade are also analyzed. For empirical analysis in this study, the methods of computing â€œactualâ€• and â€œdomesticâ€• factor contents of trade are applied to analyzing value-added embodied in trade flows. Thus we derive the â€œactualâ€• value added in trade and the â€œdomesticâ€• value added in trade. Then using World Input-Output Tables (WIOTs), the concepts related to value-added are computed and compared.