Welfare impact of bilateral tariffs under monopolistic competition

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Some bilateral tariffs remain even under WTO. They induce a question for theorists: Can any mutual tariff be welfare enhancing? A positive–protectionist–answer is known under some oligopolistic or dynamic hypotheses, see Brander & Spencer (1984). However, the question remains insufficiently studied in "new" trade theory, based on monopolistic competition. Unlike oligopoly, here strategic behavior of firms cannot be a reason for protectionist thinking. Still, some welfare gains from tariffs look generally possible, because under variable elasticity of substitution the equilibrium number of firms can be socially excessive or insufficient. So, mutual tariffs can be thought off as a remedy for such "distortion of variety." However, tariffs generate a "structural distortion:" asymmetry between consumption of domestic and imported goods. Therefore, overall welfare impact of tariffs is non-obvious. This paper supplements related theory under Krugman's trade setting. The simple setting focuses on Krugmanian market forces, unlike selection or inter-sectoral effects. We find analytically that any bilateral tariff makes the equilibrium consumption of each domestic variety growing, import decreasing. Simultaneously, total output of a firm decreases, because a monetary transfer from tariffs stimulates the domestic consumption insufficiently to compensate decreasing import. Surprisingly, variety (mass of firms), increases in tariff, because variety must be inversely related to each firm's output under free entry. In the (realistic) case of decreasingly elastic utility, we prove that for additive preferences any small tariff reduces social welfare in both countries because both kinds of distortion are summed up, but any subsidies for imports or export tariffs bring a symmetrical outcome. I.e., social welfare increases with small subsidies. To roughly quantify the losses and gains, we follow the methodology of Melitz & Redding (2015), and consider compensating variation. Using calibrated trade elasticity from the CES-literature, we apply, however, the two-parametric AHARA utility function (flexible enough for our goals).