Quality, Collective Reputation and International Trade in Wines

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Abstract :
We introduce a model of heterogenous firms with endogenous product quality and collective reputation and develop an empirical strategy to test the models' predictions. We find that our model better matches the data at hand, based on wine production and export data at firm level. In Melitz (Ecmtca, 2003), most productive firms can serve foreign markets. If quality is endogenous, however, things may differ. We extend this literature with a model in which quality is endogenous and considering collective reputation, as is the case of many manufacturing sectors of developed countries, e.g., Swiss Made watches, German cars, French wine, etc. Crozet et al. (RES, 2012) propose a quality-sorting version of Melitz (2003) and test it with firm level data. They propose (probably) the first empirical attempt to test the quality interpretation of Melitz (2003), combining firm-level data that directly measures quality (from Juhlin, a Champagne Wines guidebook) and trade (from export data) for Champagne makers. Building on Melitz & Ottaviano (RES, 2008) and Antoniades (JIE, 2015), we start from a monopolistic competition model, in which firms are heterogenous in innate quality. In addition, firms can improve quality by exerting quality development effort; moreover, production exhibits constant returns to scale, with marginal cost increasing in innate quality and final quality. On the other hand, demand is influenced by perceived quality, expressed as a weighted average of true firm quality (individual reputation) and average quality in the market, i.e., "collective reputation", in the sense of Fleckinger (wp, 2007). In the theoretical analysis we show, among other things, that the exported quality and the range of exporting firms depend on the degree of expertise of the destination market's consumers, that is their ability to distinguish individual vs. collective reputations. Using micro-data at the firm's level, we test whether quality, collective reputation (CR) and consumer expertise in the destination countries have an effect on the extensive and intensive margins of trade. We construct a set of quality indicators based on the major wine guides associated to firms. We use data on wine firms located in the Verona province, an interesting setting per se, since it has both red and white wines. In addition, for red wines in particular, it has experienced a significant increase in worldwide reputation (especially for Amarone wines) and demand. To obtain a proxy of consumer expertise in each destination market, we use Google searches in different countries by retrieving data from Google Trends. Therefore, we estimate an otherwise 'standard' gravity equation where - among other explanatory variables such as distance, GDP, population, etc. - we have proxies for collective reputation, quality and the degree of consumers' expertise in the destination markets. Using cross-sectional data, we find that quality, collective reputation and consumer expertise are indeed important in making exporting more likely (extensive margins), in exporting different products, and (to some extent) also in exporting more (intensive margins). Overall, we fail to reject the null hypothesis that the degree of expertise in destination markets do not have an effect on the firms that export and the product they do export. This seems to suggest that the endogenous quality model we propose better fits the data at hand.