Review report on the paper

Export behaviour of SMEs in the Swedish computer service industry

Research topic: The paper investigates the export behaviour of Swedish SMEs in the computer service industry. The authors use VAT-statistics for observing exports. The VAT statistics shows that the actual exports among SMEs is almost twice as large as that of trade statistics.

Research question: The determinants of export participation of Swedish SMEs in the computer service industry.

Data: The data consisted of unique firm level data based on the total population of firms in that specific industry for the period 2002-2010.

Empirical approach: Estimates are based on panel data and a conditional logit model.

Results: The results show that export participation of SMEs is significantly positively related to a lagged level of labour productivity, share of workers with a tertiary degree and firm size.

Main motivation for the research: Lack of studies on the determinants to exports among small firms.

Hypothesis: No a priori assumption.

Overall assessment: This is a strongly empirical paper, without any real theoretical support for the empirical approach (model specification). The paper's ambitions in terms of robustness tests are also very modest. The possible contribution of this paper is the study of micro companies' export propensity. But it requires a more stringent analysis to be able to draw any real conclusions. The current version of this paper is at most half done and in what follows I shall explain why.

Comments 1: The paper clams that: "In recent years there have been a number of studies investigating the export behaviour of small and medium-sized firms (SMEs). Size, labour productivity, innovation activities, skills and foreign ownership are found as key determinants of export participation and export intensity (see Leonidou et al. 2007 for a survey, Greenaway and Kneller 2007 or Wagner2007 for surveys on productivity and exporting). However, in contrast to Roper and Lover (2015), the references mentioned above do not consider SMEs. Please use the relevant references.

C2: The paper argues that studying the export behaviour of SMEs including micro enterprises is particularly interesting because these firms are very dynamic and often young, with higher growth rates but also high exit rates. Therefore, there are good reasons to believe that the firm-specific determinants of exporting differ between SMEs and micro enterprises. However, neither the *title* of the paper (Export behaviour of SMEs in the Swedish computer service industry), the *abstract* or the stated *research question* corresponds to the argument above. The paper needs to be very precise whether it is about SMEs or micro firms. I would suggest the latter. But in this case, the paper must build upon an alternative strand of literature.

C3: The paper informs that the empirical model employed is a conditional logit model which makes it possible to control for unobservable firm effects (*is this really correct*?). Moreover, the paper claims that: For the sample of Swedish service SMEs, exporting is a rare event (…) Therefore, this analysis focuses on the extensive margin rather than the intensive margin. I see no problem with that paper focuses on the extensive margin. But I think that the rationale given in the paper is doubtful. By utilizing the appropriate econometric tools, the authors may very well be able to study extensive margins. (Heckman selection model, the Lewbel selection model etc.)

C4: The paper refers to Bernard and Jensen (2004) and claims that their finding is applicable also on SMEs. Please provide relevant references. It might be due to my ignorance, but I am not aware that B&J (2004) discusses SMEs.

C5: The formulation of the empirical model. The paper applies a panel data approach. But the formulation of the model and the specification of the error term are confusing. In

the model specification, the paper uses epsilon for the error term. And then (some rows below) the authors define epsilon as the idiosyncratic error term. Moreover, the papers claims that it controls for endogeneity by lagging some selected explanatory variables (while others are expressed in the instantaneously dimension). What are the arguments for lagging certain variables, and how it is assumed that this strategy reduces potential endogeneity? (Typically the literature uses instrumental variable approaches to control for endogeneity, and it use to test whether the instruments are valid)

C6: "The error term can be decomposed into three parts: a time-invariant unobserved characteristic, time effects and a normally distributed random error with zero mean and unit variance." Perhaps this information is superfluous in a scientific journal? This remark also applies to the remaining text on the choice of estimator.

C7: The paper discusses whether it should apply a random effect logit or a fixed effects model, then it suddenly concludes that it should use a model introduced by Chamberlain (1980). I did not see the logic step. Please provide a more elaborated discussion.

C8: The paper chooses to estimate micro firms (1-10) and SMEs other than micro firms separately. I cannot find any strong argument supporting this approach. I would recommend that the paper assess the determinants to both the smallest firms and other SMEs in the same regression, using an alternative model specification.

C9: (Related to C8) The paper compares the estimates from both sample s (micro firms (1-10) and SMEs other than micro firms). But the estimates from two different samples are not statistically comparable.

C10: No proper summary statistics (mean, standard deviation, min, max) is provided. I am somewhat surprised that the mean value for output per employee is higher among non-exporters than among exporters when the size group 10-249 employees are considered. Due to outliers/data problems?

C11: I wonder whether retailers of products produced by other (larger) companies are included in the group of micro sized services exporters. If so, does the paper account for

this?

C12: No correlation matrix is provided

C13: Regarding the specification of the model, perhaps the paper should experiment with value and sales instead of value added per employee (labour productivity). Labour productivity is often a less appropriate measure for the very small firms. In addition, this approach would solve some of the log-transformations problems that the authors are struggling with

C14: When the authors choose to publish multiple tables with regression results, they must (i) make it clear to the reader what separates these tables, (ii) accurately report the key findings from each of the tables. The result section is poorly written. This assessment also applies to the concluding section, which should include a discussion how the paper has contributed to a deeper understanding of micro firms and SMEs propensity to export

Concluding remarks: I believe that this paper contains too many elementary mistakes to be publishable in its current status, and I believe that it requires a major revision to approach a scientific publishing status. I hope that my suggestions above can be helpful in this process. The authors have access to an interesting data sets, but they should be able to do much more of this rich and unique information.