

Topics in Behavioural and Experimental Economics

Azmat and Petrongolo (2014)

SE 040518, 2015S, University of Vienna

Thomas A. Stephens (1047811)

23 June 2015

1 Abstract

Azmat and Petrongolo (2014) consider gender differences in labour market outcomes, and discuss the potential of experimental economics to explain these differences. They focus on three interconnected forces, namely *discrimination*, *productivity* and *preferences*. The first is largely a demand-side (employer) issue and the second a supply-side (employee) issue, linked to investment in human capital. The third is also a supply-side issue, but one that has largely been ignored in research using the traditional regression approach, as well as in experiments based on field data.

Discrimination has been central to many traditional analyses of gender differences in the labour market, so Azmat and Petrongolo (2014) start with it. They describe the regression approach, which entails decomposition of male-female wage and participation differences into ‘explained’ and ‘unexplained’ gaps. The first links differences in worker- and job-related observables to differences in wages and participation. The remainder is the difference ‘explained’ only by gender (or other discrimination-related observables).

A weakness in the regression approach is the absence of data on all relevant worker characteristics, including productivity. Azmat and Petrongolo (2014) explain that field experiments, including audit and correspondence studies, can help to overcome this problem. Audit studies involve submitting paired applications for job openings, and comparing call-back and hiring rates. Each member of the pair is, to the extent possible, identical with the other member, except for gender. Most importantly, the use of identical educational qualifications controls for investment in human capital that is expected to predict productivity. Correspondence studies are similar to audit studies, but involve submitting CVs/resumes for fictitious candidates, with analyses limited to call-back rates. In both cases, there is evidence of gender discrimination.

Systematic differences in preferences across genders are potentially important factors in the respective labour market outcomes. They have been largely ignored in both regression analyses and field experiments, because of data limitations. The ability to measure preferences is a key advantage of lab experiments, and the results reviewed by Azmat and Petrongolo (2014) suggest that systematic differences in preferences may

be relevant to gender differences in labour market outcomes. The ability of lab experiments to shed further light on this topic implies considerable potential for further contributions.

2 Comments and Criticism

Azmat and Petrongolo (2014) combine a concise presentation of the traditional approach in labour economics with a discussion of what the experimental approach can add. In so doing, they cover a broad range of experimental literature. The literature includes many interesting results. Unfortunately, the discussion is often limited to discussions of whether or not a particular result is significant in a statistical sense, ignoring the equally important issue of economic significance.

An example of the above can be found in the last paragraph on page 35. Azmat and Petrongolo (2014) point to a weakness of audit and correspondence studies, related to distributions of unobserved productivity. Specifically, an identical mean across genders does not imply identical distributions. The other moments of the distribution (variance, skewness and kurtosis) also matter. If the applicant populations differ by gender only in terms of variance, for example, then there could be an appearance of discrimination. *Ceteris paribus*, an employment threshold below the mean would lead to more hiring from the group with a lower variance, and the reverse for a threshold above the mean.

Reflecting on the above argument, it is arguably the case that in highly paid occupations, the employment threshold is likely to be above the mean productivity level for applicants. Given the higher variance in male IQ test scores (Arden and Plomin 2006; Dykiert et al. 2009), it is therefore plausible that employers assume higher variance in male productivity. An interesting issue, then, is the overall effect on expected productivity of small differences in expected variance. As Niederle (2014) explains with respect to risk preferences, although there are significant gender differences, they are relatively small. As a result, a prediction based on gender is only marginally better than a coin toss.

An interesting empirical result discussed by Azmat and Petrongolo (2014) is the effect of gender quotas for management boards in Norway on management style (Matsa

and Miller 2013). Azmat and Petrongolo report Matsa and Miller's finding that female directors either consider labour hoarding a more profitable long-run strategy, or have greater concern for workers' vulnerability to unemployment risk. In discussing the topic, Matsa and Miller refer to experimental evidence that women are generally more long-term oriented (Silverman 2003). In the short run, they note that a reduced frequency of layoffs reduces profits. The more interesting, and as yet unanswered, question is, is labour hoarding actually a more successful strategy in the long run?

Doepke and Tertilt (2014) provide potential insight into the above question, in the context of development, using a non-co-operative model of household decision making. According to their model, transfers to women are likely to be more beneficial than transfers to men when the most important factor of production is human capital. Conversely, when physical capital or land are most important, transfers to men are likely to be more beneficial. These differences stem from the fact that women tend to spend more of the transfers on children, improving child quality in the sense introduced by Becker (1960), whereas men tend to spend more on physical capital. Could similar results carry over to management of firms in developed countries, with human capital in the context of employees rather than children?

Another interesting result mentioned in Azmat and Petrongolo (2014) relates to the performance of single- and mixed-gender teams. Apesteguia et al. (2012) and Hoogendoorn et al. (2013) both find that mixed-gender teams perform better than single-gender teams. These results tend to suggest that mixed-gender teams are optimal from a firm perspective. Whether they are optimal for the women involved, however, is not clear, given that women tend to compete more effectively in single-gender settings (Niederle 2014). Mixed-gender teams may produce the best results, but lead to rewards being skewed towards the male team members. If this turns out to be the case, are there any potential solutions?

References

- Apestequia, J., Azmat, G., & Iriberry, N. (2012). The Impact of Gender Composition on Team Performance and Decision Making: Evidence from the Field. *Management Science*.
- Arden, R., & Plomin, R. (2006). Sex differences in variance of intelligence across childhood. *Personality and Individual Differences*, 41(1), 39–48.
- Azmat, G., & Petrongolo, B. (2014). Gender and the labor market: What have we learned from field and lab experiments? *Labour Economics*, 30, 32–40. doi:10.1016/j.labeco.2014.06.005
- Becker, G. S. (1960). An Economic Analysis of Fertility. In G. B. Roberts (Ed.), *Demographic and Economic Change in Developed Countries* (pp. 209–240). New York, NY: Columbia University Press. <http://papers.nber.org/books/univ60-2>
- Doepke, M., & Tertilt, M. (2014). *Does Female Empowerment Promote Economic Development?* (No. 19888). *NBER Working Paper Series*. doi:10.3386/w19888
- Dykiert, D., Gale, C. R., & Deary, I. J. (2009). Are apparent sex differences in mean IQ scores created in part by sample restriction and increased male variance? *Intelligence*, 37(1), 42–47. doi:10.1016/j.intell.2008.06.002
- Hoogendoorn, S., Oosterbeek, H., & Praag, M. Van. (2013). The Impact of Gender Diversity on the Performance of Business Teams : Evidence from a Field Experiment. *Management Science*, 59(7), 1514–1528.
- Matsa, D. A., & Miller, A. R. (2013). A female style in corporate leadership? Evidence from quotas. *American Economic Journal: Applied Economics*, 5(3), 136–169.
- Niederle, M. (2014). *Gender* (No. 20788). *NBER Working Paper Series*. doi:10.3386/w20788
- Silverman, I. W. (2003). Gender Differences in Delay of Gratification: A Meta-Analysis. *Sex Roles*.