

Reply for Referee's Report

March 8, 2009

Comment 1 The motivation for the study and the significance of the results were not properly communicated. For example, one main conclusion is that “the labor market is not in equilibrium” since “labor productivity varies between plants and companies”.

But the authors implicitly define equilibrium as zero variance of labor productivity (i.e. deterministic equilibrium). If the authors had discovered that the labor market was actually in this kind of state of deterministic equilibrium – well that would be very surprising! Finding the opposite is much less surprising, given that the labor market has a huge number of degrees of freedom and weak micro-level coordination.

The authors do not mention that the labor market might in fact be close to another kind of equilibrium – namely statistical equilibrium. In this kind of equilibrium we would not expect zero variance of labor productivity, although we should expect a relatively constant distribution of labor productivity over time. Perhaps the authors could consider testing this proposition? This would be better than knocking down a straw man.

Reply 1 We agree to referee's comments, so we removed the statement “the labor market is not in equilibrium”. We simply mentioned that marginal labour productivity is in statistical equilibrium, and depends on the business sectors.

Comment 2 The authors assume a Cobb-Douglas production function and find that the data seems to support this assumption. The authors

might be interested in the point that such empirical corroboration in fact simply reflects an accounting identity. E.g., see A. Shaikh, *Laws of Production and Laws of Algebra: The Humbug Production Function* (1974) *The Review of Economics and Statistics*, Volume 56(1), February 1974, p. 115-120.

Reply 2 Shaikh (1974) assumed constant aggregate share. However, as shown by Ikeda and Souma (2008), this assumption is not correct in the data which we are investigating. In addition, even if we accept the result of Shaikh (1997), and consider that empirical corroboration simply reflects an accounting identity, the definition of marginal productivity is not modified. In our article, we need the definition of it.

Comment 3 Perhaps this is an unfair observation, but I found the discussion of the fitting of the Generalized Beta distribution a little repetitive and overlong. I also got the feeling that the authors might mention what other distributions they tried fitting to the data, and why they selected this particular one.

Reply 3 We added the fitting result by a log-normal distribution, as shown in Fig. 3(a), and stated that the log-normal distribution is not applicable to the case.

Comment 4 The authors did not explain why they thought it important to split the data into manufacturing from non-manufacturing parts. What is different about these sectors that would justify this split?

Reply 4 To split the data into manufacturing from non-manufacturing does not have special meaning. Thus, we simplified the construction of sections, i.e., Sec. IV and V in old version of our article are summarized by Sec. IV in new version of it.

Comment 5 The paper would benefit from the removal of typos and some better sentence construction. But this doesn't get in the way of comprehension, apart from a misspelling of "two" as "tow".

Reply 5 We removed typos. The paper is checked by a native of English.

Comment 6 The authors note that the "inequality of labor productivity of the non-manufacturing industry is higher than that of the manufacturing industry". But they don't attempt to explain why this might be so.

Reply 6 We are now investigating the origin of this fact, but we have no solution up to now. This is future work.