This paper corrects some technical errors of the method used by Tanzi for estimating the output of the informal sector using data on monetary aggregates. The corrections proposed are completely unobjectionable. Once equation (1) is taken as an adequate equation for modelling currency demand, the rest is hermetic.

The only problem one can encounter is with the possible failure of equation (1). It is difficult to find a theory of money that would give this equation and where this equation would be appropriate for both the formal and informal sectors.

Currency is used for a fraction of exchanges in the formal economy. Checks, credit and debit cards, and electronic transfers make up the rest (and most) of the formal transactions, especially in developed countries. Cash is normally relegated to paying for quite small transactions or those transactions that the formal sector does with the informal sector. During the last 50 or so years, improvements in transactions technology have systematically reduced cash usage in the formal sector. These technology changes mean that estimating $\beta$ in equation (1) using long run data should give a value less than one for every reasonably developed country.

The technology of transactions in the informal sector has not changed much over time. Most transactions there are normally made with other members of the informal sector and are done with either cash or cash substitutes such as third party checks. Aside from velocity changes that are most likely to come from other sources, changes in output in the informal sector are likely to be accompanied by a one to one change in the use of cash. There is good reason to believe that the long run value of $\beta$ in the informal sector is one.

A similar argument can be made for the coefficient $\gamma$ in the part of the
equation that measures the reaction to changes in the opportunity cost of holding cash. The formal sector has a host of alternatives and cash holdings are likely to be quite sensitive to the opportunity costs. Almost by definition, the informal sector does not have alternative assets available to it and is likely to be much less responsive to changes in the opportunity cost of holding cash (this in spite of the fact that it uses relatively more cash).

A Kiyotaki and Wright type model of money suggests that one would hold the type of transactions medium that minimizes costs given the characteristics of the other agents with whom one is likely to want to make transactions. In an economy with a large informal sector, members of the formal sector are more likely to want to make trades with members of the informal sector and will end up carrying more cash than in an economy with a small informal sector. This occurs because members of the formal sector will want to buy more from the informal sector and because they will sell more to the informal sector. The probability of a transaction with the informal sector are higher where this sector is large and all agents of the economy will use relatively more cash. This suggests an alternative method for determining the size of the informal sector in a cross country study. Using data on cash flows into and out of banks (or from company’s balance sheets) and transactions using other bank instruments (wire transfers, credit and debit cards, and checks), one might be able to infer what fraction of transactions are being done outside the formal sector. Since all countries use some cash, a country like Norway, Sweden, or Finland could be used as the base (zero informal) measure and other country’s informal sectors could be calibrated from this.

Estimating the size of a country’s informal sector is extremely difficulty, precisely because the nature of the informal sector means that it leaves no trail for the researcher to follow. The technical corrections recommended by this paper are a step in the right direction for this difficult task. What remains to be done is a better modelling of the transactions technologies in each sector and how they are related. The monetary models of Kiyotaki and Wright might be one way of making progress.