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Towards an Islamic Macro Model of Distribution: A Comparative Approach

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Comments: K.A. Naqvi*

1. The paper attempts to present a model which incorporates the notion of *Zakah* where three categories of income recipients exit: First, those with wage and profit income who are obliged to pay *Zakah*,' secondly, those who receive wage and profit income and in addition get a fraction of *Zakah*; finally, those who receive the remaining fraction of *Zakah*.

This model has apparently been worked out as an extension of the Ahmad Model** which had three classes - the capital owners, *Zakah* recipient workers and workers who are not recipients of *Zakah*. The *Zakah* recipients do not own *Zakatable* assets. For a given productivity of assets, and a given *Zakah* rate, Ahmed calculated the redistributive effect of *Zakah* in respect of the three classes. He further assumed that only the capital owners and the non-*Zakah*-recipient workers save. Ahmad then proceeds to derive the standard Kaldor-Pasinetti results with the four components of aggregate income.

The author wishes to break away completely from the post-Keynesian influences, and hence attempts to construct an Islamic model of distribution to achieve this aim. Let us look at the bare bones of this model.

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* These comments were received when **Dr. Al-Jarhi's** paper was sent to late **Prof. Khaleeq Ahmad Naqvi** as a referee and were not meant for publication. But they are being reproduced here in view of the fact that the author could not find time to carry out the various improvements suggested in this note despite his agreement with them. Those who wish to comment on the main paper are welcome to take this note also into consideration.
Prof. **K.A. Naqvi** who passed away in April 1984 at the age of 58 participated in the Second International Conference on Islamic Economics, Islamabad (March 1983). A Director of the Delhi School of Economic for several years, Prof. **Naqvi** served on a number of national and International committees with distinction. May Allah grant him forgiveness and Mercy. [Editor].

** Now available in **Ahmad. Ausaf**: "A Macro Model of Distribution in an Islamic Economy", *Journal of Research in Islamic Economics*, Vol. **2**, No. **1**. Summer 1404/1984, pp. 1-20

2. Let there be a category of wage and profit earners with income $\overline{Y}_1$ who pay *zakah* as fraction z of their income, with a post-*zakah* income of $Y_1 = \overline{Y}_1$ (1-Z). Let there be another category of persons with income Y_2 consisting of their wage and profit income and a fraction a of the *zakah* paid by the former. Finally, let there be a set of people who receive a fraction (1 - a) of the *zakah*, which we will represent as xY_1.[1]

Let Y be the aggregate income, then:

$$Y_1 + Y_2 + x\,Y_1 = Y \tag{1}$$

Let s_1, s_2 and s_3 be the saving propensity of the three categories of income, and let S be the equilibrium average rate of saving of the economy. Then:

$$s_1\,Y_1 + s_2\,Y_2 + s_3\,xY_1 = sY \tag{2}$$

We can easily derive

$$\frac{Y_1}{Y} = \frac{S - S_2}{S_1 - S_2 + X(S_3 - S_2)} \quad \text{(3)and}$$

$$\frac{Y_2}{Y} = \frac{S - S_1 + X(S - S_3)}{S_2 - S_1 + X(S_2 - S_3)} \tag{4}$$

$$\frac{Y_3}{Y} = \frac{X(S - S_2)}{S_1 - S_2 + X(S_3 - S_2)} \tag{5}$$

The above is only a reformulation of the model presented in the paper and Appendix II. But comparing the two it will be evident that unnecessarily complicated symbols and relations have been introduced by the author.*

The author may find it useful to reformulate equation (22) - (23-c) by using any simplified set of symbols he may care to adopt. It may be clarified equations (1) to (5) above deal with the post-*zakah* income shares, while the author presents original income shares in equations (18) and (21) of Appendix II.

The more fundamental point is that the author is under the impression that in the Kaldor-Pasinetti Model income shares depend only on the saving propensity of just one group - capitalists. This clearly is wrong. That on certain assumptions the higher of the two or more rates of saving will dominate at the equilibrium long run path certainly does not imply that in a Keynesian comparative static framework income shares are independent of the saving of all other groups.

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1. It is obvious that $X = \frac{(1-a)Z}{1-Z}$

* This was followed by some suggestions which the author accepted, modifying the relevant equations accordingly. These lines have, therefore, been left out. [Editor].

Here another point must be made. If one postulates a level of investment $\bar{I}$ to which corresponds a level of $\bar{Y}$ (income at full employment), and finds income shares of different groups with their own specific saving propensities which will ensure the emergence of savings equal to this level of $\bar{I}$, one is really adopting what the author calls the post-Keynesian tradition. If $s\bar{Y} = \bar{I}$, in a simple two-class or two income-category model we have

$$Y_1 + Y_2 = \bar{Y} \qquad (6)$$

$$S_1Y_1 + S_2Y_2 = S\bar{Y} \qquad (7)$$

where Y_1 and Y_2 and the levels of income, and S_1 and S_2 are the saving propensities of the two classes, S by definition the average rate of saving. From (1) and (2) we easily obtain:

$$\frac{Y_1}{\bar{Y}} = \frac{S - S_2}{S_1 - S_2} \qquad (8)\text{and}$$

$$\frac{Y_2}{\bar{Y}} = \frac{S_1 - S}{S_1 - S_2} \qquad (9)$$

Equations (6) - (9) are the standard Kaldor-Pasinetti results. Comparing these equations with equations (1) - (5) based on the author's approach, it is clear that income shares in both models depend on saving propensities of all the classes.

Our author claims: "The automatic transfer of savings into investment and the non-existence of hoarding assure that savings are equal to full employment investment". Is it being claimed that in an economy one cannot postulate a savings propensity which is inadequate for providing a level of savings required to ensure full employment, even if all savings are invested? Such an assertion is patently false. In the pre-Keynesian tradition, if all savings are invested, one assures that there is no "glut", but full-employment (of labour and capital) is assured only when the level of savings is appropriate. Let us recall that in Keynes the level of income is adjusted to ensure that with a given propensity to save, the level of saving equals the magnitude of investment by entrepreneurs. In his model, the author has adopted the standard Keynesian procedure: one first determines the full-employment level of investment (and hence income) and subsequently determines the share of income of different categories to ensure that, given their specific saving propensities, the right amount of savings are generated.

3. Turning to the model of factor shares, a very peculiar procedure is adopted. A part of the *Zakah* is paid to the wage and profit earning recipients, who save at a certain rate out of their own wage income plus their share of the *zakah* paid on wage income of the *zakah*-payers; however, they save at a different rate out of their profit income and their share of *zakah* paid on profits. (Equation (32) of Appendix II) The other recipients of *zakah* save at the same rate out of the *zakah* paid out of wages and out of profits. No rationale is provided why an individual receiving a total income of given magnitude should have different saving propensities for various categories of income. If this criticism is valid, equations (35) and (38) of the Appendix II would need modification.

The same is true of equations (28) and (29) of the text.[*] And certainly the conclusion presented on p.26, as pointed out earlier, needs to be changed.

Another problem in the model is that a fraction of the *zakah* which is supposed to be allocated to other uses is also saved, this saving does not seem to generate any profit income. This looseness of the model can be corrected either by postulating no savings out of this fraction of *zakah*, or by redoing the equations on factor shares.

4. One weak part of Ahmad's paper was the claim that the system shall be in long run dynamic equilibrium provided investment equals savings. Actually, this is the condition of a static equilibrium. The long- run equilibrium involves some notion of a natural rate of growth. The author therefore is right in postulating an exogenously given g, and further postulating that capital assets of recipients and not recipients in a steady state must grow at this rate.

It is evident that given g and saving propensity of the two classes, capital assets of the two classes would get adjusted at the appropriate level corresponding to the wage-profit ratios of the two classes, and the values of a and z. The author, however, takes the impermissible step treating g as a variable in equations (30) and (31) of the text while in Appendix II he correctly presents in equations (39) and (40) savings- capital assets ratio of the two classes being determined by g. Not only would the equations (41) to (46) have to be recast, but the conclusion that an Islamic society so outlined would have a higher growth rate would also require reformulation.

5. I must express my distress at the totally unacceptable section entitled "Western Approaches to Distribution". The very opening para states "The Western thought on capital, growth and distribution is divided between classicists and non-classicists. The classical[**] approach encompasses both the Marxist and the Austrian theories, while the non- classical include the neoclassical and the post-Keynesians". Apart from the linguistic *faux pas* contained in this sentence, to claim that the Austrian theories were classical, or indeed that the Austrian thought was even concerned with growth, unnecessarily prejudices a reader, in the very beginning of the exercise. against what the author has to say subsequently. Either the author should take the trouble to present the classical approach (at least from Adam Smith onwards) and Marx (and not just from a couple of pamphlets and secondary sources) or drop large chunks of this section. The tradition of the study of the classical school has been weak for a considerable period, and one should not touch this subject unless one can do justice to it.

I would therefore suggest for the consideration of the author that the first few pages of text be rewritten and considerably expanded. Alternatively, one should confine oneself to a careful presentation of Kaldor's innovations in the Keynesian framework. Pasinetti's reformulation and extension based on a class analysis. and Ahmad's restatement of the Kaldor-Pasinetti model with *Zakah*. This would form an appropriate introduction to the authors own contribution.

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[*] The author accepted this criticism and these equations appear in a modified form in his paper published in this issue [Editor].

[**] Some modifications in response to this Criticism my be noticed in the paper. [Editor].

6. Let me in conclusion state clearly that the most important virtue of this paper is to stress the importance of income transfer to the poor through *Zakah* to enable this class to build up capital asset. One should carefully explore the relationships which would gradually transform the poor into the non-poor and the recipients into null-recipients through income transfers. It does not require much ingenuity to prove that payment by the rich (or by profit earners) of *Zakah* reduces inequality. The heart of the matter is the *mechanism* which transforms *Zakah* into an instrument of social change. It is the merit of the author that he brings out this aspect of *Zakah* clearly. Inspite of all technical errors, which can be removed with some effort on the part of the author. the fundamental points remains valid, and must be pursued further.

I have another suggestion to make. *Zakah* could be treated as a tax on wage and profit income, but it is also a levy on stock. The author has taken the position that "saving are automatically channeled to investment" and that "... to hoard in an Islamic society is irrational". It is my understanding that few Islamic scholars would accept the proposition that since holding unproductive stock is irrational, *zakah* in an Islamic society would be levied only on the current wage and profit income. Indeed, *zakah* on unproductive assets could be an important part of the mechanism for social change mentioned above. The author may like to consider how best to deal with this question.