

Factor Pricing And Income Distribution From an Islamic Perspective

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1 INTRODUCTION

Factor pricing determines the functional distribution of income which is an important part of personal or size distribution of income and wealth in an economy. Economic growth can hardly alleviate the curse of poverty and increase human welfare if growth leads to concentration of its fruits among a few of the population. It is therefore important to see how the income generated per period of time is distributed among the factors of production involved in the production process through the mechanism of factor pricing and, among others, by means of transfer payments in the form of *Zakat*, charities, government dues and so on.

This paper deals with pricing of factors of production and its implication for functional distribution of income from an Islamic perspective. The paper has five sections including this introduction. Section 2 investigates the factors of production and provides their definitions. Factor pricing and income distribution in traditional economics is briefly explained in section 3. In section 4, the general normative principles of factor pricing and income distribution in Islam are described. Section 5 analyses the core problem of factor pricing and income distributional implications. Some concluding remarks are made in section 6. Although the scope of the paper covers all factors of production, it concentrates more on labour and its pricing for obvious reasons.

2 FACTORS OF PRODUCTION AND THEIR DEFINITIONS

2.1 *Number of Factors of Production*

Four factors of production are recognised in the main stream of traditional economic analysis : land, labour, capital and entrepreneurship. Each of them gets its factor share from the produced

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goods and services. Under an ideal system of socialism, land and capital are considered as state properties, and the business and industries are organised by the state. Therefore, the only factor that gets remuneration is labour and the entire residual income is retained by the state. The productive factor relevant for pricing analysis is thus only labour.

There is no agreement on the number and definitions of the factors of production among the writers on Islamic economics. According to some, the factors are four, but the definitions are different; while some others exclude one and come up with only three factors of production.¹ The *Qur'an* and the *Sunnah* do not explicitly mention factors of production, but there is an implicit indication about them. The disagreement referred to above is due to the divergence in perceiving this implicit phenomenon.

Although the number of factors is not explicitly mentioned in the Islamic *Shari'ah*, the principles of factor shares have been discussed. The number may be perceived from this analysis of factor-shares by implication.

An example may clarify the matter. If one says that there are two factors, L and K, and these will get X and Y amounts respectively, then the number of factors is explicit, that is two: L and K. If, however, one says that L will get X-amount and K Y-amount, then the number of factors is not explicit, but it is implied, that is again two: L and K.

Shari'ah provides that labour can be hired on a fixed wage and the reusable physical assets (buildings, machines, land and so on) on a fixed rent. Capital and entrepreneurship will receive predecided percentages of profits. Capital and entrepreneurship cannot, however, be added together for at least two reasons. First, their profit shares are not the same which have to be negotiated and decided upon. Second, there is a gulf of difference between capital and entrepreneurship; for example, capital bears the risk of losses while entrepreneurship does not.

¹ For example, Mahmud Abu Saud considers four factors of production along the line of traditional economics. See his *Khututun Riasiyah fil Iqtisad al-Islam*. Beirut: Matba'at Ma-tuq Ikhwan 1965. On the other hand, Mufti Muhammad Shafi and Dr. M.A. Mannan enumerate only three factors of production; the former excludes entrepreneurship, while the latter excludes capital from the list of factors of production. See SHAFI, Mufti Muhammad, *Distribution of Wealth in Islam*. Karachi: Begum Aisha Bawany Wakf, 1979, and Dr. MANNAN, M.A. "Islamic Economics. Lahore: Ashraf Publications, 1970. See also SADEQ, A.H.M., "Distribution of Wealth in Islam" in Dr. K.T. Hussain et al. (eds.) *Thoughts on Islamic Economics*. Dhaka: Islamic Economics Research Bureau, 1980. Mufti Muhammad Shafi also provides a definition of capital which is distinctively different from others.

Thus, implicit in the *Sharī'ah*, there are four factors in the production process. These are labour (L), physical assets (A), capital (K) and entrepreneurship (E).

2.2 *Definitions of Factors of Production*

Like the numbers, there is no explicit mention of the definition of the factors of production in the Islamic source materials. One can, however, perceive their definitions by implication from the analysis of their remuneration and from other relevant discussions. For instance, a fixed return on capital is not allowed in Islam, but a fixed return on a building (rent) is allowed and, therefore, building cannot be termed as capital. Thus, the definition of factors of production in Islamic economics are different from those of conventional ones. Again there is no agreement on their definitions in Islamic economics.² I submit below my perceptions of their definitions some of which may appear to be similar to others, while some others may be distinctively different.³

Labour is simply defined as human services, physical or mental. Those who are involved in management and supervision are also broadly included in labour. That is, a human service, whether it is a manual work or managerial service, is considered as labour provided it is based on a contract of a fixed wage/salary. The organisational service, which is provided for a share of profit, instead of a fixed return, is not included in labour. This human service also assumes risk of getting zero return in case of losses. This is called entrepreneurship to which we will move on later.

The second factor of production is physical assets. All those reusable material means that can be leased and rented out on a fixed rental basis for use in the process of production may be termed as physical assets.⁴ There are three features of this factor of production. First, it can be a natural resource (termed as land in traditional economics) or a produced reusable good (termed as capital in traditional economics). The example of the former is a piece of land, and that of the latter is a machine. Second, it can be used on rental basis; for example, a building. Third, it may depreciate for using in production.

²See for example, SHAFI, Mufti Muhammad, op. cit. and SADEQ, A.H.M., op. cit., pp. 54-62.

³For instance, see the definition of capital and physical assets.

⁴Sometimes, some physical assets may be employed in economic or business activities to earn a share of profits instead of a fixed rent. In such cases, the value of such physical assets is really treated as a share of capital, instead of considering the physical assets in physical terms.

Capital is the financial means of production. It constitutes of liquid money, near money or monetary assets. According to this definition, produced means of production (e.g. building or machine) are not included in the definition of capital.⁵ A simple reason is that a building (or any other physical asset) may earn a fixed return (rent) while the capital is not allowed to do so. The two are thus not the same factor of production.

In traditional economics, capital is defined as the produced means of production such as machineries, building etc. This seems to be only the theoretical definition of capital in economic literature. For all practical purposes, the financial resources and not the physical materials, are considered as capital. It is well-known that the price of capital in traditional economics is interest. Neither an entrepreneur nor an economist calculates interest on a building. What is the interest rate of a building? Or of a machine? And how does one calculate the interest rate of a building? Is it calculated per square feet, or how? The real practice is different, anyway. An entrepreneur takes money from the bank and spends it in renting/constructing a building, buying machines, paying the workers and so on. The bank charges interest on money lent and not on the assets bought by the money. Interest is also charged on money used to make payments to workers, supervisors and managers, who are not considered as capital. Therefore, in practical uses, money and financial resources are considered as capital.

Money has a potential productive power because of its command over real assets, and its potential contribution in the production process by transforming itself into any physical assets, goods and/or services. Therefore, it is legitimate to earn a return from the productive use of money. But the way a return is associated with money in traditional economics, i.e. interest, is not allowed in Islam. This is because the distribution of return through the mechanism of interest is based on injustice, and it causes a number of other evils.⁶

Entrepreneurship is defined as the organisation of business or industrial activity by collecting and combining all other factors of production, conducting the whole process of production, and running the whole show right from the level of venture idea to the marketing, calculation and distribution of profits without assuming the risk of

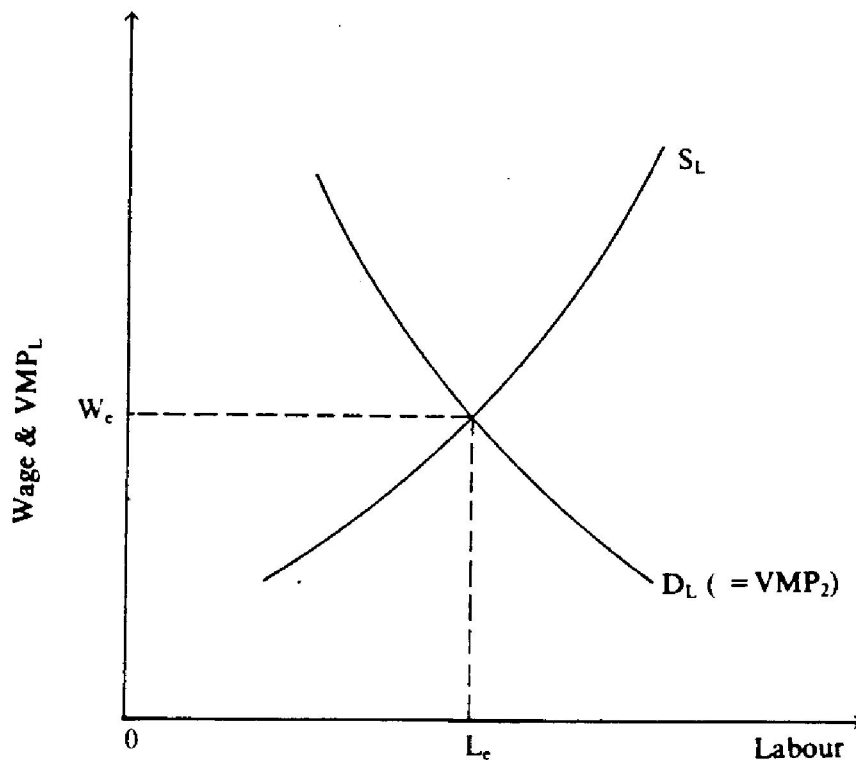
⁵In a partnership business, a partner may use his physical assets as a share of his capital contribution. In such cases, the value of the physical assets, rather than the physical assets themselves, is treated as capital.

⁶For a discussion on the evils of interest, please see Section 5.3 of this paper.

losses in capital.⁷ An important distinction between this definition and that in traditional economics is that, in the latter, it bears the entire risk of the activity and gets entire profits, while in the former entrepreneurship *per se* does not take the risk of losses (which is really borne by capital), rather it merely loses the fruits of its efforts and, therefore, it is not eligible also to receive the entire profits. It gets a share of profit whose rate is predecided.

3 FACTOR PRICING AND INCOME DISTRIBUTION IN TRADITIONAL ECONOMICS

Before we deal with factor pricing and income distribution in Islam, it is useful to see the traditional theory of factor pricing and income distribution. The most celebrated one is the marginal productivity theory (MPT) of distribution.⁸ According to this theory, a factor will be paid a price equal to its marginal product. That is, the produced goods and services will be distributed among the factors of production in accordance with their marginal products. Let us consider the price of labour in terms of this theory.



Factor Pricing in Conventional Economics

Figure 1

⁷In the real world, many of these functions are performed by salaried managers in large scale enterprises. But they are not entrepreneurs. The entrepreneurs are those shareholders who employ the managers, make policies to be implemented by the managers, and finally take the risks and responsibilities.

⁸See PEN, Jan, *Income Distribution*. London: Penguin Books, 1971.

In Figure 1, OL_e of labour will be employed and a wage equal to OW_e will be paid per unit of labour, since at this wage the labour supply curve intersects the demand curve for labour which is derived from the value of marginal products (VMP_L).

This theory has very limited application in the real world. The MPT has been heavily criticized in economic literature; but at the same time widely celebrated. Some of its limitations are as follows.⁹ First, it is applicable only in the production function of homogeneous of degree one which is rare in practice. Adding up problems arise in the two other more realistic production functions.

Second, the MPT assumes perfect competition in the factor market where all economic powers are fragmented. But it cannot explain discrimination between men and women, between races and social classes; nor can it incorporate the real world phenomenon of collective bargaining by trade unions. (Wages can be pushed up without relation to MP_L).

Third, the MPT also requires that the entrepreneurs must be profit-maximizers by equating $MP_L = W$. In practice, most entrepreneurs rarely do so. The entrepreneurs may have several other objectives which may include: (a) maximization of sale, that is, acquiring the largest market share, (b) earning some average profit on the capital invested, and/or (c) maximizing some other social goals subject to some profit constraints.

Fourth, the MPT does not deal with the remuneration of entrepreneurs even if profits of the entrepreneurs constitute about 20% of national income in some countries.¹⁰

In the real world, if the concept of marginal productivity is useful at all in the employment theory, it is used only as a guideline to determine the extent of employment and not for the determination of factor prices. The wages are really determined by collective bargaining, social conventions, minimum wage legislation and so on.

Thus, the traditional theory of factor pricing and functional distribution of income is inadequate.

4 GENERAL NORMATIVE PRINCIPLES OF FACTOR PRICING AND INCOME DISTRIBUTION

4.1 Principles of Factor Pricing

There are two general normative principles of factor pricing in Islam. These are as follows:-

⁹For a detailed analysis of criticisms see PEN, Jan, op. cit., pp. 76 - 87.

¹⁰See PEN, Jan, op. cit., p. 80.

i) *Justice*

Pricing of factors of production should be based on justice. Islam requires one to be just in all his/her dealings.¹¹ Besides, it is ordained clearly that a person will receive what he works for and, therefore, justice in factor pricing is to fix a price which corresponds to the factor's contribution.¹² The word 'corresponds' has been used instead of 'equals' to imply that factor pricing does not have to be 'exactly equal' to its contribution, but it should correspond to it. The closer, however, the price is to contribution, the closer it is to justice.

ii) *Scarcity*

This refers to supply relative to demand conditions, that is, to market forces. If gold is very scarce compared to its demand, its higher price is not unethical. If land is abundant, it may be cheap. This pertains to the interplay of demand and supply forces in the determination of factor prices. This interplay, however, should be within the reasonably acceptable range of justice.

There is an additional principle of humanity pertaining to the pricing of human service and labour. This will be discussed later in the context of pricing labour service.

4.2 Principles of Income Distribution

Now we move on to the principle of income distribution. Allah *SWT* provides a general normative principle of income distribution in connection of the description of distributing *fai* revenues. "So that it cannot circulate among the rich of you".¹³ This Quranic verse clearly provides a norm against the gross inequalities of income and wealth in an Islamic economy. Instead, it tends to support and recommend equity in the distribution of income and wealth.

In addition, other provisions of the *Shari'ah* presents a bias towards equity as a general principle. First, law of inheritance gives a mechanism of a wider distribution of the deceased's wealth among the relatives, instead of being concentrated in a few hands.¹⁴ Second, the institutions of *Zakat* and '*Ushr* redistribute wealth

¹¹Al-Qur'an 16:90.

¹²Al-Qur'an 53:39; 4:32; 83:1-3.

¹³Al-Qur'an 59:7.

¹⁴For equity implications of the Islamic law of inheritance, see SADEQ, A.H.M., op. cit., pp. 49-54.

from the well-off to the worse-off people in the society.¹⁵ Third, Islam recommends other compulsory dues, optional charities, gifts and so on for redistribution of income and wealth.¹⁶ Fourth, the redistributive and equity considerations seem to be so strong in Islam that it asks even some sinners to pay to the poor as *Kaffara* (expiation).¹⁷ Fifth, Islam prohibits all practices which may lead to illegal transfer of resources for income concentration like gambling, cheating, stealing and so on.¹⁸ These Islamic provisions are not the subject of this paper. But they clearly indicate a normative principle of redistribution for equity in the distribution of income and wealth.

It does not, however, imply that the distribution of income and wealth should be 'equal'. A proposition of equality in income is quite unnatural, because people are not equal in skill, efforts, health and intellectual capabilities. Justice requires that these differences be recognised. If income distribution in Islam has to be absolutely equal, then the question of *Zakat* and other payments does not arise at all which have been ordained in Islam.

In short, Islam recognises differences in earnings in the ways allowed by Islam, but also provides some checks so that income distribution may not be very highly skewed, and presents normative principles of income distribution which tend to make it equitable rather than absolutely equal. This normative principle of equity does also operate in factor pricing.

5 FACTOR PRICING AND INCOME DISTRIBUTION: A THEORETICAL FRAMEWORK

It is not a function of normative economics to provide some positive theory of determining factor prices and of functional distribution of income. Islam does not as well do so. Like any other normative economics, it provides some value-loaded guidelines for determination of factor prices on the basis of its principles of justice, scarcity and equity which have implications for functional distribution of income. However, this normative value system regarding factor pricing and income distribution can be analysed in a theoretical framework.

¹⁵Ibid., pp. 6 - 73.

¹⁶Ibid., pp. 73 - 76, 78 - 80.

¹⁷Ibid., pp. 76 - 78.

¹⁸Ibid., pp. 80 - 86.

5.1 Pricing of Labour Service

In pricing the human factor of production, labour, one must follow the general normative principles of factor pricing (justice and scarcity) and that of distribution (equity). In addition, as indicated earlier, there is a humanity element in pricing labour. It needs some elaboration.

Labour (human) service is not treated as a saleable material commodity in the Islamic code of life and hence in Islamic economics.¹⁹ Labour is an inseparable attribute of mankind. And man is the vicegerent and the best creation of Allah *SWT* raised for some noble objectives.²⁰ A free man cannot be sold like a commodity and so is an attribute which is inseparable from him. The owner of a land can separate it from him to sell its service (ie. to rent it out), but a man has to take his whole existence to the place of work to render human service. But Allah *SWT* provides for mutual cooperation among people by rendering service to each other to keep the world going in accordance with the law of nature given by Him.²¹ Furthermore, man is made responsible for his dependents and for other financial obligations related to Islamic values.

The role of justice, humanity and altruism will be primary and that of market forces secondary in determining the price of labour. This adds some extra considerations to the problem in question. The important ones are as follows: First, there should be a man-to-man brotherly employer-employee relationship in overall behavior, and not like a man-to-material relationship.²² Second, the work load and working condition should be humanly acceptable;²³ there is a limit to work load even if there is none in the degree of seedling in a piece of land.²⁴ Third, employer must guarantee basic needs (food, clothing, medicare etc.) of the brother employee.²⁵

All these considerations tend to amount to ensure a reasonable real wage or a humane minimum wage to meet basic needs. This

¹⁹In traditional Economics, labour is treated as a saleable commodity.

²⁰Al-Qur'an 3:110; Al-Qur'an 51:56.

²¹Al-Qur'an 43:32; Al-Qur'an 28:27.

²²"Your employees are your brethren who Allah *SWT* has made your subordinates..." (Bukhari and Muslim).

²³See SADEQ, A.H.M., op. cit., p. 59; and HUSSAIN, K.T. and SADEQ, A.H.M., *Islamer Orthaniti (Islamic Economics)*. Vol. 1, Dhaka : Bangladesh Madrasa Education Board 1986 pp. 81-82.

²⁴Al-Qur'an 28:27; "Do not assign a work to your employee which is burdensome on him; if you do so help him out." (Sahih Bukhari).

²⁵"He who has his brother as his employee should give him such food what he eats and such clothes which he wears" (Sahih Bukhari).

should not, however, lead to a confusion that Islam requires one to pay his employee a salary to meet the entire basic needs of his family even if it is higher than his contribution in the production process. What it means is that if the justice and scarcity principles pull the wage rate into two opposite directions, the humanity principle will come in and strengthen the contribution aspect of the matter.

With this in mind, we proceed to a tentative theory of wage determination which may fit into Islamic framework. In this context, let us assume that an employer wants to earn an average rate of profit from invested capital²⁶ and, accordingly, an average return from labour employment (constant returns to scale are assumed).

Since wage depends on both subjective (humanity) and objective (contribution and market forces) factors, it will be more appropriate to define first a possible range of wages rather than a fixed one. The principle of humanity will play an important role in determining a particular wage within this range.

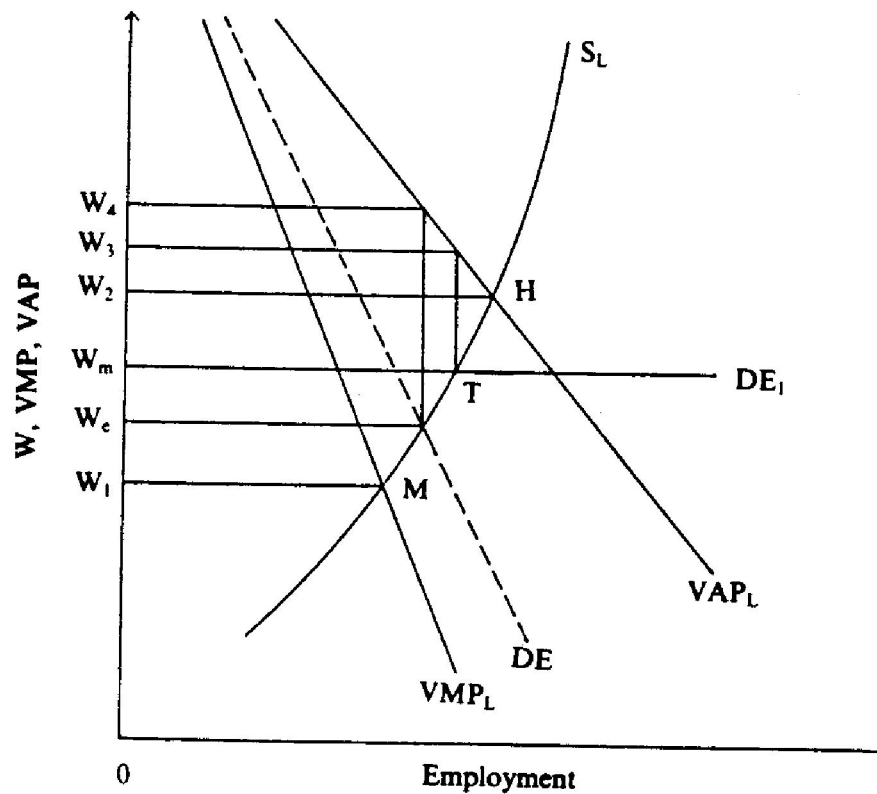
The upper limit of this wage range will be the value of average product of labour (VAP_L). The wage rate cannot be higher than VAP_L , otherwise the enterprise will be subjected to losses. The lower limit may be that which is determined by the market forces alone because of the following reason. If the demand and supply conditions are such that the market forces guarantee a reasonable and humane wage, other two principles will have to play negligible roles in determining wages. Then the desired wage will correspond to what is determined by market forces alone in traditional economics. This is given by the intersection of demand (value of marginal product, VMP_L) and supply curves at which $W = VMP_L$. Thus the wage cannot fall below VMP_L at a given level of employment which sets the lower limit of the possible wage range.

Therefore, the upper and lower limits of wage rates are VAP_L and VMP_L which give the wage range $VMP_L \leq W \leq VAP_L$. The exact wage within this range will depend on the application of humanity principle whose required role may vary in time and space, and on the entrepreneur's average desired rate of profit.

This implies that the VMP_L is the labour demand curve only in a special case when the market forces ensure the desired wage. Except for this special case, the position and shape of the effective demand curve for labour will be different from the one derived from the VMP_L , which will be influenced by objective and subjective

²⁶This assumption is quite logical since, in reality, the entrepreneurs rarely consider marginal values in order to satisfy the marginal conditions of profit maximisation.

factors, namely, labour productivity, desired average rate of profits and humanity principle. The application of the humanity principle will depend on the altruistic behavior of the employer or the *hisba* role of the Government, or both. If the role of humanity principle is significant in the wage determination and/or a reasonable average rate of profit is desired, the employer will tend to pay a wage higher than the VMP_L at each level of employment. Accordingly, the effective labour demand curve, say DE , will lie between VMP_L and VAP_L . The intersection of DE and the labour supply curve, S_L , will give the wage rate which may be considered to be in consistence with Islamic norms and values. This can be illustrated geometrically.



Determination of Wage in An Islamic Economy: General Case

Figure 2

In Figure 2, the VMP_L and VAP_L are values of marginal and average products of labour respectively which are net of VMP and VAP of physical assets used in the process of production. S_L is the labour supply curve. As analysed earlier, the minimum wage in the wage range will be $W_1 = VMP_L$ which is given by the intersection of VMP_L and S_L , and the maximum wage $W_2 = VAP_L$ is given by the intersection of VAP_L and S_L . So the relevant range of S_L is MH , indicating the minimum wage by M and the highest wage by H . Therefore, an employer may neither pay a wage higher than OW_2 , nor a wage lower than OW_1 . Now the range of wage is

W_1W_2 . It is clear from the diagram that the condition $VMP_L \leq W \leq VAP_L$ is satisfied in this range. If the wage, W , is fixed at the extreme points of OW_1 or OW_2 we have $W_1 = VMP_L$ or $W_2 = VAP_L$ respectively. Any wage in-between the extremes will have $VMP_L \leq W \leq VAP_L$.

We now introduce the effective demand curve combining both subjective and objective factors. Let us assume that the effective demand curve is DE . The equilibrium wage is OW_c which is within the wage range determined earlier. Here equilibrium wage is higher than the VMP_L but lower than the VAP_L , $OW_1 < OW_c < OW_2$. Therefore, the employer is making a profit of W_cW_4 out of per unit contribution of labour.

The role of collective bargaining has so far been ignored. If an appropriate weight is given to subjective factors in determining the effective demand curve, the role of collective bargaining by trade unions will have to be minimal. If, however, the phenomenon is the other way around, the role of collective bargaining and the legislative authority will be to shift the effective demand curve upwards to result in a higher equilibrium wage.

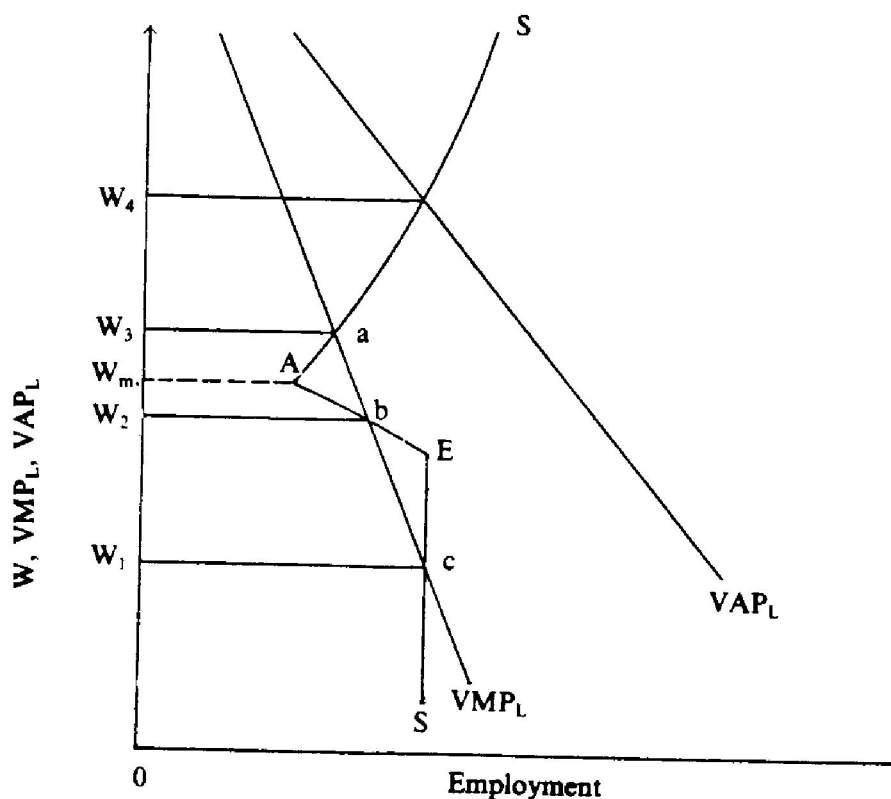
The question of basic needs may now be addressed. It is implied from the saying of the Prophet *SAW* that an employer should guarantee basic needs of his employee.²⁷ The employee has to support his dependants, if any, from his earnings. It is, therefore, a moral duty on the part of the employer to pay enough to meet the employee's basic needs subject to the maximum of $W_2 = VAP_L$. But it is not wise to push the wage rate up to $W_2 = VAP_L$ because, in doing so, the entrepreneurial incentive may be affected adversely. Therefore, a minimum wage legislation may be adopted in an Islamic economy to guarantee basic needs of employees subject to the condition that a minimally acceptable per unit profit will be left for entrepreneurship and capital. If this is not enough to satisfy basic needs, the amount of deficit will be paid from the social security funds developed by *Zakat* and other revenues meant for the relatively worse-off population.

The amount required to meet basic needs will be determined by the average cost of a modest living of the average sized family in the country. If this amount is OW_m in Figure 2, the Islamic state may fix this floor wage which amounts to a shift in the effective demand curve from DE to DE_1 which intersects S_L at T determining the equilibrium wage OW_m . The employer will still be earning per unit profit of W_mW_3 out of labour's contribution.

²⁷"He who has his brother as his employee should give him such food what he eats and such clothes which he wears" (Sahih Bukhari).

Employment effect of this is favourable. Since the effective demand curve lies to the right of VMP_L , the point of intersection between DE and S_L will also lie to its right, that is, between VMP_L and S_L . This clearly implies a higher employment of labour which is obvious from the above diagram.

The labour supply curve, S_L , in Figure 2 is typical of an economy where the bargaining strength of labour is reasonably satisfactory. The phenomenon of labour-abundant less developed countries (LALDC) seems, however, to be quite different. In these countries labour is terribly exploited by paying a wage rate way below VMP_L , not to mention the VAP_L . This is possible because of the nature of labour supply in LALDCs. In particular, the unskilled labour is paid wages which are below the survival minimum. In this condition, workers work more when wage falls to earn enough to satisfy survival minimum. But they cannot do so infinitely because of their physical limitations. Minimum wage legislation is a safeguard in this situation. This can be illustrated diagrammatically.



Determination of Wage in an Islamic Economy:
The Case of LALDCs

Figure 3

In Figure 3, SEAS is the labour supply curve of which AS is normal supply curve. OW_m is the wage rate required for the survival minimum of an average family. At this wage, labour

supply is $W_m A$. If the wage rate falls down, the workers increase hours of work to maintain their earnings to the survival minimum which implies a higher supply of labour at wages below OW_m . They can, however, do so up to E along the SEAS beyond which any further increase in working hour is physically impossible and thus the labour supply curve becomes a vertical line ES.²⁸

In this Figure, the VMP_L cuts the labour supply curve at three points a, b and c. If the employer wants to pay a wage which is equal to VMP_L , he can pay as low as OW_1 , as high as OW_3 , or a wage equal to OW_2 . Obviously a profit maximizing firm will pay the lowest possible wage, OW_1 , and receive the maximum possible profits by employing the largest amount of labour. This kind of labour exploitation seems to be widespread in many LALDCs.

In an Islamic economy, the employing firm can be made to pay a wage in the range $W_3 W_4$ because of the reasons explained earlier. The exact wage will again depend on the level of moral standard of the employer, collecting bargaining and/or the minimum wage legislation of the Islamic state which determines the shape and position of the effective demand curve. The employment effect will again be favourable as mentioned earlier.

This pricing of labour in an Islamic economy has favourable distributional implications. In both cases, general and LALDC, labour gets a higher real wage without adverse effects on employment. The share of labour in the functional distribution of income pertaining to labour's contribution is more equitable. This satisfies both the general normative principles of factor pricing and income distribution.

5.2 Pricing of Physical Assets

To recall, all reusable and rentable productive assets, whether produced or unproduced, are included in physical assets. The general principles of factor pricing and distribution will apply in determining the prices of these physical assets, A. This is different from the pricing of labour to the extent that human element is missing in this case which plays an important role in determining the exact price of labour.

The absence of the humanity principle allows one to resort to the market forces to determine the prices of physical assets. This may refer to two kinds of pricing. First, pricing of the physical asset itself which obviously depends on the demand and supply conditions, that is, the market forces. Second, pricing of the service of the physical assets which is more relevant in the present context.

²⁸The labour supply may, however, increase smoothly when the wage is above OW_4 because of the new entry into the labour force at higher wages.

According to the Islamic *Sharī'ah*, a fixed price for the services of the physical asset is allowed, and it is called rent. For example, a machine or a building can be rented out at a fixed rate for use in the production process. This fixed return is legitimate even if any losses are incurred from the activity because the contracted service has been used and the physical asset is likely to depreciate for using its service.²⁹ The entrepreneur receives the transacted service which causes depreciation of the asset, and hence its price must be paid, no matter what happens to the outcome of the project. This analogy cannot be applied for financial assets because money does not depreciate because of its use. The face value of a unit of old paper money is not different from that of a new one.³⁰

In addition, since there is no human element in pricing productive materials, the need for legislative floor pricing may not arise at all. Thus, their prices may well be determined by market forces. The productivity aspect will be reflected in the strength of its demand which may be expected to satisfy a reasonable degree of justice.

5.3 *Capital and Entrepreneurship*

In traditional economics the price of capital is interest; and the entire profit is retained by the entrepreneur. In Islamic economics, on the other hand, these two factors of production share in profits which are defined as sales revenues minus all costs and payments to all factors excluding entrepreneurship and capital. Therefore, both capital and entrepreneurship are analysed here together.

Islam rejects interest as a price of capital.³¹ This is because it is the root of many socio-economic evils. Some of them are as follows. First, it is an injustice for capital to receive the benefit only and not to share in any losses. In an interest-based system, the entrepreneur is discriminated against when he has to pay the fixed interest even in case of losses; and on the other hand, the contributor of capital is discriminated against when the entrepreneur makes a large profit, but only a nominal interest is paid for the capital. Such discrimination is a clear injustice.³² Second, it is a big source of gross inequalities of income.³³ In the modern world,

²⁹Although a cultivable land does not seem to depreciate, its utilization does use up its fertilizer content which is compensated by man or nature.

³⁰The depreciation of the value of money due to inflation is not because of its use, but rather because of other conditions of the economy.

³¹Al-Qur'an 2:275, 278-279.

³²See SADEQ, A.H.M., op. cit., pp. 59-60.

³³Ibid., p. 60.

the industrialists borrow capital from banks and make large profits but pay only a small part to the depositors through the banking system. This is an indirect transfer of income from the masses of depositors to the industrialists. This leads to concentration of income and wealth in the society. Third, interest limits investment, while profit sharing increases it.³⁴ Fourth, interest is considered as a cost of production and hence the price of the product is adjusted to it so that the consumers are affected because of the higher prices of goods and services.³⁵

Interest is, therefore, prohibited in Islam.³⁶ In Islamic economics, the prices of capital and entrepreneurship are simultaneously determined. The sizes of these prices are post-determined, but the shares are pre-determined. Nobody can pre-determine in an ex-ante sense the exact sizes of returns to be received by capital and entrepreneurship, it is rather an ex-post phenomenon. The share of each of them must, however, be pre-determined in an ex-ante sense. The principles of sharing profits or losses will depend on the form of business.

There are two major forms of business: *Mudharabah* and *Musharakah*. In the case of *Mudharabah*, entrepreneurship does the business with other's capital, whereas the partners share in capital in the case of *Musharakah*.

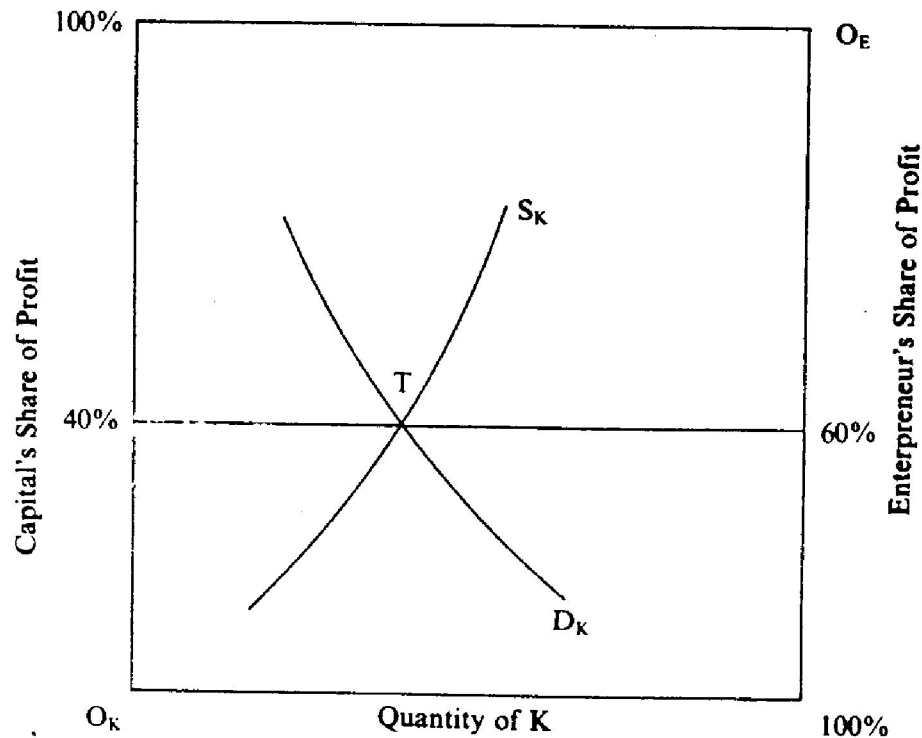
In each of the forms, general principles of factor pricing and income distribution will be applied in the ex-ante determination of the share of capital and entrepreneurship. In the case of *Mudharabah* these shares will be determined by the interaction of productivity-adjusted demand for and scarcity-adjusted supply of capital, D_K and S_K respectively.

This can be illustrated by a diagram. In Figure 4, O_K and O_E are origins for capital and entrepreneurship respectively. Prices (profit shares) of capital and entrepreneurship in the percentage terms are measured along the left and right vertical axes respectively, and the amount of capital along the horizontal axis. The upward sloping supply curve of capital, S_K , implies that the quantity of capital supplied increases as the capital's share of profit in percentage increases; and the downward sloping demand curve for capital, D_K , implies that the quantity demanded for capital increases as capital's share of profit falls. It should be

³⁴For more details on this, see the present author's "Economic Development in Islam", *Journal of Islamic Economics*, vol. 1, No. 1 (Aug.-Sept., 1987), pp. 35-45; and "Economic Growth in an Islamic Economy", paper presented at the *International Seminar on Islamic Economics* held in Kuala Lumpur on 6-9 July, 1987.

³⁵See HUSSAIN, K.T and SADEQ, A.H.M., op. cit., p. 98.

³⁶Al-Qur'an 2:275,278-279.



Ex-ante Determination of Profit Shares in Mudharabah Business

Figure 4

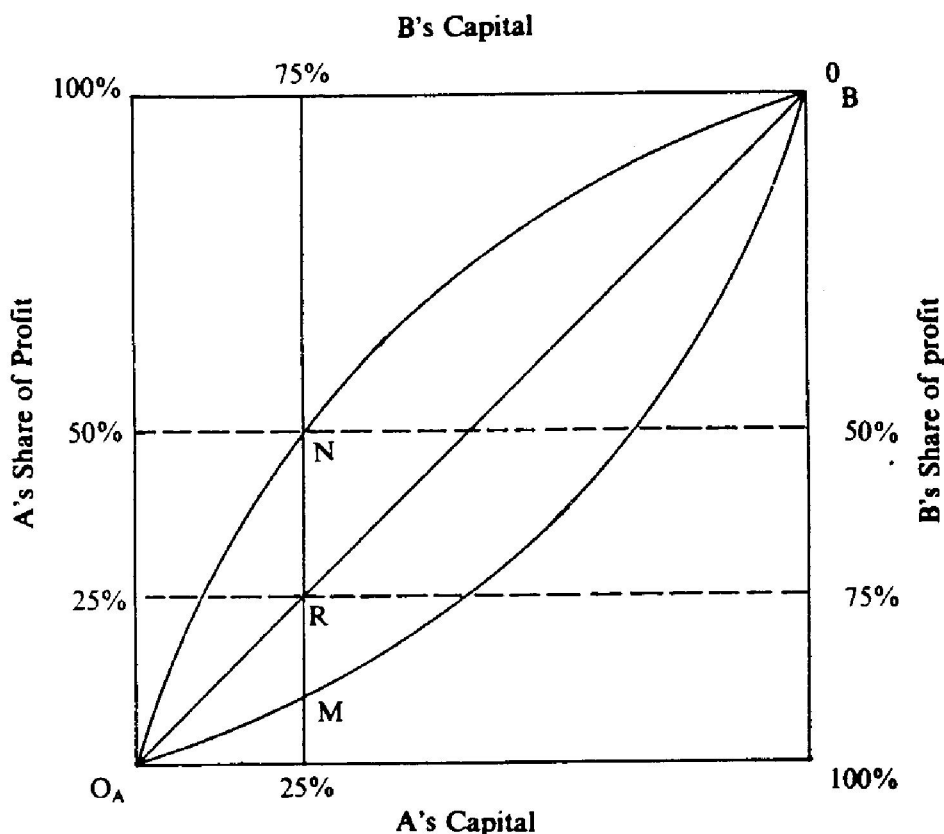
noted here that the prices of capital and entrepreneurship are indeed the profit shares, and not any fixed amount of money.

The D_K and S_K intersect at T which simultaneously determines profit shares of capital and entrepreneurship. It determines 40% profit shares of capital so that the rest 60% of the profit shares goes to entrepreneurship. This analysis will be applicable when any positive profit is made. If no profit is earned, or if any losses are incurred, the risk of zero profit or losses will be borne by capital, and the entrepreneurship's service will go unrewarded. There is thus no problem of distributing the losses in case of *Mudharabah* and, therefore, is not dealt with in the diagram.

In case of *Musharakah*, more than one person contribute capital. The factor pricing is again based on profit sharing. Opinions, however, differ as to the basis of profit sharing. In one opinion, it is more justified to share profits on the quantifiable basis of their contribution which is capital. That is, each partner will share in profits on the basis of his percentage contribution in capital.³⁷ In the other opinion, it is more justified to share profits among the partners on the basis of their organisational and entrepreneurial

³⁷This is the view of the Shafi'i and Maliki Schools of Islamic jurisprudence, see HUSSAIN, K. T. and SADEQ, A.H.M., op. cit., p. 123.

services.³⁸ According to them, the partners may negotiate and decide about profit sharing in percentage terms irrespective of their shares in capital. This can be illustrated with the help of a diagram. For simplicity, let us assume that there are only two partners, A and B, in the business.



Ex-ante Determination of Profit Shares in Musharakah Business

Figure 5

In Figure 5, O_A and O_B are origins of A and B respectively. The lower and upper horizontal axes represent capital contributed by A and B respectively. The left and right vertical axes depict shares of profits going to A and B respectively. The vertical and horizontal distances of the axes are the same.

According to the first opinion the distribution line is given by $O_A R O_B$ which represents equality in the percentages of profits and capital. For instance, let us assume that A contributes 25% of capital (along A's capital axis). This corresponds to R on the distribution line which implies 25% share of profit for A along A's profit axis. This simultaneously indicates that B contributes 75% of capital (along B's capital axis) and hence receives 75% of the

³⁸This is according to the Hanafi and Hanbali Schools of Islamic jurisprudence, *Ibid.*, p. 123.

profits (along B's profit axis). This simultaneous solution can be derived by assuming any other share of capital contribution by the partners.

The distribution line may be different when the second opinion is applied. The shape may vary from a straight line like O_ARO_B to any curvature above or below the straight line. If the share of A is larger, the distribution curve will be above O_ARO_B and vice versa. For example, let us assume that the distribution curve is O_ANO_B . Then A will get 50% of profits by contributing only 25% of the capital, while he gets only 10% if the distribution curve is O_AMO_B .

In case any losses are incurred, the distribution of losses will be based on the share of capital contributed, because the share of entrepreneurial services will go unrewarded. Therefore, the straight line O_ARO_B will be applicable for the distribution of losses.

The income distribution in both the *Mudharabah* and *Musharakah* arrangements are equitable because each party receives a share of profits on the basis of its contribution in the production process. None gets a fixed share irrespective of the size of profit.

6 SUMMARY AND CONCLUDING REMARKS

This paper deals with factor pricing and its implication for functional distribution of income from an Islamic perspective. The factors of production in Islamic economics are different from those of traditional analysis. Some of the major differences are as follows. Labour is not anymore a saleable commodity in traditional sense of the term. A new factor of production, physical assets, is incorporated and defined. This is defined as the reusable material means that can be leased and rented out on a fixed rental basis and includes what is included in capital in traditional economics such as machineries and buildings. Capital is defined as the financial means of production. It is argued that, for all practical purposes, financial resources are treated as capital in traditional economics as well. The principles of factor pricing are justice and scarcity. Justice requires a price which corresponds to a factor's contribution and scarcity refers to the market forces in determining prices. It should be borne in mind that this is to reflect the real scarcity, and not a crisis created artificially. A human element is incorporated in pricing labour service.

Based on these principles, it is argued that the wage rate of labour will lie in between the values of marginal and average products. The exact rate will depend on the strength of the humanity principle embedded in the employer or enforced by the minimum wage legislation to meet the basic needs of the employee subject to a minimum profitability constraint. In particular, the enforcement

of humanity principle would have to be stronger in the labour-abundant less developed countries. For labour is exploited inhumanly in these countries and, accordingly, the income distribution in these countries are more skewed than the developed countries.

A fixed return on physical assets is allowed even if losses are incurred from the activity because the transacted service has been used which causes depreciation to physical assets. This analogy cannot be used for financial assets which do not depreciate.

The prices of capital and entrepreneurship are simultaneously determined in the Islamic economic system. These two factors receive the residual income after paying all the other factors of production. Their shares are determined in an ex-ante sense, while the actual sizes are determined ex-post. Entrepreneurship *per se* does not bear the risk of losses in capital. It works as an agent of the contributors of capital and receives a share of profit. But if the agent is unsuccessful in making profits, its services go unrewarded.

Factor pricing in Islamic economics is equitable. Every factor of production gets a just reward of its services which limits the possibility of gross inequalities in income.

Income distribution in the less developed countries is highly skewed. This is also true for the Muslim countries. It is high time for the Muslim countries to implement the Islamic principles of factor pricing for human welfare.

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