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Social Business: A Graphical Approach to Analysing the Implications for Social Welfare

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ABSTRACT

This paper attempts to analyze the idea of social business - a brainchild of Dr. Muhammad Yunus and a very recent addition to the economic thoughts. It tries to show the welfare implications of social business with the help of graphical illustrations. It also provides an overview of the idea. Drawing upon the simple frameworks of monopoly and competitive markets, the graphical analyses show that conversion of traditional business companies into social business companies results in increased social welfare.

Keywords: Consumer surplus, Firm, Market, Producer surplus, Social business, Social welfare.

INTRODUCTION

The history of economic thought witnessed the emergence of numerous ideas pursuing the dream of eradicating poverty and hunger from the face of the earth. Robert Owens' cooperative system, Amartya Sen's Human Development Index, Muhammad Yunus' microcredit & Grameen Bank and, of late, the latter's thought of social business are significant among such ideas. Considering the present world with the feature of pervasive poverty and helplessness, any idea intended to reduce poverty assumes overriding importance. Yunus first drew significant attention from around the world by materialising his revolutionary idea of microcredit through Grameen Bank. Later on, he came up with the concept of social business - other ground breaking idea - creating a huge intellectual wave throughout the business world[1].

[1]Muhammad Yunus was born in 1940 in a village named Bathua under Hathazari thana of Chittagong district in Bangladesh. He received PhD from Vanderbilt University in 1971. In the meantime, he joined Middle Tennessee State University in 1969 as an assistant professor, and worked there until 1972 before returning to Bangladesh. In 1983, he established Grameen Bank. He and Grameen Bank were jointly awarded the Nobel Peace Prize in 2006 for their landmark contributions in creating a ground for peace by uplifting the poor through providing microcredit. Besides the Nobel Prize, many other national and international prizes of diversified categories have been in his credit.

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This paper attempts to build graphical models to illustrate the welfare implications of this new business concept. To the best of my knowledge, this is the ever first attempt to illustrate the idea of social business in the form of diagrams. The importance of diagrammatising such an idea lies in the fact that graph is a very powerful and palatable tool for making a theory understandable to the general audience. It is important to note that, in general, an idea cannot be popular, and hence cannot be implemented on a large scale, until and unless it is graspable to a broad range of audience.

It is generally claimed that social business generates more welfare than traditional business does. This claim needs to be tested theoretically as well as empirically. Empirical investigation is beyond the scope of this paper. However, a theoretical investigation is possible. This paper pursues such investigation based on the above mentioned graphical analysis. Our hypothesis is that social business will be found to be welfare enhancing.

The remainder of the paper is organised as follows. Section 2 contains a very brief overview of social business. Sections 3 and 4 provide graphical illustrations of how social business firms operate under different market structures. These two sections also shed light on the welfare consequences of firms' social business motive. Finally, concluding remarks are given in Section 5.

WHAT IS SOCIAL BUSINESS ALL ABOUT?

Definition

Historically, capitalism has been misinterpreted as not having any room for entrepreneurs and investors with a motive other than profit motive. This boils down to the fact that the multidimensional nature of human being remains ignored. Essentially, capitalism is amenable to improvements. With the recognition of multifaceted desires of human beings, potential for another kind of business arises, which is termed as social business. It is a new kind of private business the goal of which is to solve social problems. A social business is not owned or operated by government (see Younus & Weber, 2007; Younus & Weber, 2010).

Social business is of two types: Type I and Type II. There is an important difference between them. Type I social business firms earn profit while Type II social business firms do not. However, profits earned from Type I social business firms are spent for solving social problems and reinvesting in new social business. This very nature implies that the welfare implications of Type I social business are much straight forward and hence do not warrant much discussion. But since the objective of Type II social business does not resemble that of the traditional business, the welfare implications of Type II social business has so far remained unexplored and hence need to be clarified.

In view of the above definition of social business, this paper attempts to discuss only the welfare implications of Type II social business. Henceforth, the term "social business" will mean Type II social business.

The Difference between Social Business and Profit Maximising Business

Unlike a profit maximising business (PMB), a social business is run on the basis of "no loss, no dividend" principle. Yunus and Weber (2007) precisely clarify the distinction between a PMB and a social business, "In its organizational structure, this new business (social business) is basically the same as the PMB. But it differs in its objectives. Like other business, it employs workers, creates goods or services, and provides this to customers for a price consistent with its objective. But its underlying objective - and the criteria by which it should be evaluated - is to create social benefits for those whose lives it touches. The company itself may earn a profit, but the investors who support it do not take any profit out of the company except recouping an amount equivalent to their original investment over a period of time. A social business is a company that is cause-driven rather than profit driven, with the potential to act as a change agent for the world."

A social business company, however, is not a charity either. Unlike a charity, it has a full cost recovery scheme. It is only entrepreneurs' and investors' profits that a social business company forgoes. The sense of commerciality gives a social business company sustainability. Those non-profit organisations and non-government organisations that rely on charitable donations are not social business companies in any sense whatsoever.

GRAPHICAL PRESENTATION OF THE MODEL: COMPETITIVE CASE

This model is intended to illustrate Yunus' theory of social business graphically. It is a very much simplistic model based on somewhat stronger assumptions. Once the current model is built, one can try to alter the assumptions to produce other versions of the model. Among the market structures, only competitive market and monopoly market are analysed for the sake of analytical simplicity. Besides, these two market structures are often used as benchmark cases in economics. Once these benchmark cases are understood well, the analyses can be extended to other cases with much ease.

Assumptions

i. A number of identical firms are operating in a competitive market.

ii. The number of firms is optimal. No further entry or exit occurs.

iii. Each firm has the same motive.

Equilibrium at the Firm Level

A social business firm sets its output at such a level that its objective (no loss, no dividend) is satisfied. That means the output decision of the firm must reflect the following:

$$\pi = TR - TC = pq - TC = 0 \quad [1]$$

$$\text{Or, } p = \frac{TC}{q} = AC, \quad [2]$$

where π, *TR, TC, p, q* and *AC* stand for profit, total revenue, total cost, price, quantity, and average cost, respectively. It is important to note that the total cost of a social business firm does not include profits. Equation [2] implies that the firm-level equilibrium output corresponds to the point of intersection between price curve and AC curve. This is the first-order condition for equilibrium in a social business setup. Fig.1 illustrates how a typical social business firm reaches equilibrium in the short run. While the upper panel of the figure presents *TR-TC* approach, the lower panel presents price-*AC* approach. Two output levels, q' and q^*, appear to satisfy the first-order condition *p=AC* (equivalently *TR=TC)*. Given the two levels of production consistent with a certain price, the firm owner can be supposed to be generous enough to select larger one, q^* in this case. Thus, the second-order condition can be stated as follows: quantity produced would be the largest among the levels of quantity at which *p=AC*.

For comparison purposes, the short-run equilibrium of a traditional firm is also shown in Fig.1. Based on marginalism, the traditional firm decides to produce *q''* to maximise profit. At this output level, the distance between *TC* and *TR* is maximum (upper panel) and the criterion *MR=MC* holds (not shown to keep the figure simple).

It appears that a social business firm produces more than a traditional firm. This is because a social business firm attains equilibrium on the basis of AC curve. MC curve losses relevance in its decision making procedure. So this curve no longer represents

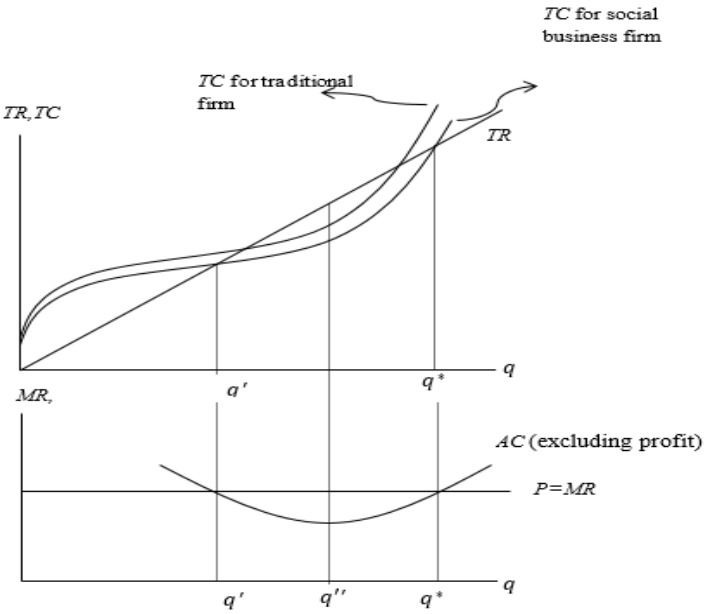

Fig.1: Equilibrium of a social business firm: competitive case

the supply behaviour of a firm. Rather, the upward portion of AC curve serves as a firm-level supply curve. The intuition is that as firms are not profit seekers, they produce in such a way that just the cost is recovered.

Industry Equilibrium

To facilitate understanding, let me suppose that initially price and quantity are determined by the traditional market principle - the equality between quantity demanded and quantity supplied in the market level and the equality between marginal revenue (*MR*) and marginal cost (*MC*) in the firm level. Fig.2 illustrates the equilibrium of a market with two representative firms (to keep illustration simple, only two firms are considered). Table 1 summarises the equilibrium situation when the firms follow the traditional market principle.

Now, suppose the participating firms decide to run their business on the basis of social business motive. That means, entrepreneurs and investors will not receive any profit. As a result of this transition, firms' AC curves shift downward by the amount of foregone profit. As explained in Section 4.2, under the new circumstances, upward portion of AC curve represents the supply behaviour of a firm. Therefore, the market supply curve can be found by horizontally adding together the upward portions of the AC curves. Accordingly, the market supply curve $\sum AC'$ in Fig.2 is derived by taking horizontal summation of the upward portions of firms' "no loss no dividend" *AC* curves - AC_1' and AC_2'.

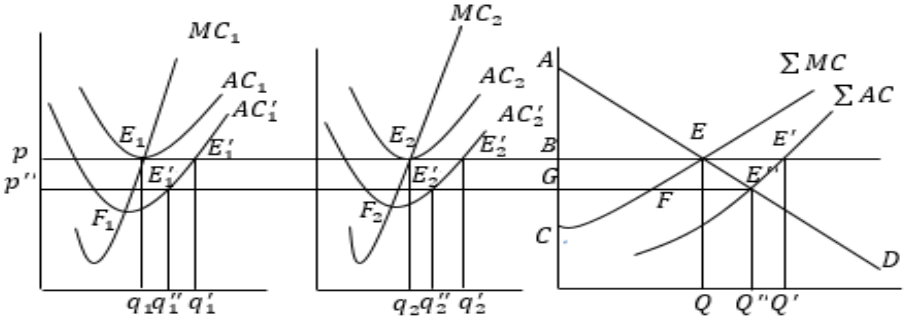

Fig.2: Market equilibrium in a social business framework: competitive case

TABLE 1
Equilibrium situation when firms operate under the traditional framework: competitive case

	Equilibrium point	Output	Price	Profit /unit	Supply curve[2]
Firm-1	E_1	q_1	p	$E_1 F_1$	MC_1
Firm-2	E_2	q_2	p	$E_2 F_2$	MC_2
Market	*E*	*Q*	*p*	Weighted average of the above	∑MC

Source: Fig.2

[2]The portion of MC curve which remains above AVC curve is considered as the supply curve of a traditional firm.

The new market price is determined at p′′ by the intersection of the market demand curve D and the new market supply curve $\sum AC'$. The firms take this price as given and equate it with the new average cost to reach equilibrium at q_1'' and q_2'', respectively. The new equilibrium market quantity is Q'' $(=q_1''+q_2'')$.

Equilibrium Mechanism

As clearly shown in Fig.2, once the firms decide to act on the social business motive, they begin to produce a total of Q' $(=q_1'+q_2')$ at the prevailing price p to satisfy the criterion price=average cost. As a result, the market experiences an oversupply amounting to QQ', which causes market price to decrease. With the decrease in price, the firms adjust their production in accordance with the equilibrium criterion. The falling trends in price and quantity prevail until a new market equilibrium E'' is reached. At this new equilibrium, price is equal to average cost (excluding profit) in the firm level and market demand becomes exactly equal to market supply. Table 2 provides a summary of the equilibrium situation when the firms decide to pursue the social business motive.

Welfare Implications

As shown in Fig.2, there are changes in the welfare situation as a consequence of the firms being converted into social business companies. These changes are summarised in Table 3. It appears from this table that once the firms make a transition from the profit motive to the social business motive, the consumer surplus necessarily increases. Meanwhile, the producer surplus declines to zero. However, it is quite ambiguous whether the total welfare increases or

TABLE 2
Equilibrium situation when firms operate under the social business framework: competitive case

	Equilibrium point	Output	Price	Profit /unit	Supply curve
Firm-1	E_1''	q_1''	p''	0	AC_1'
Firm-2	E_2''	q_2''	p''	0	AC_2'
Market	E''	Q''	p''	0	$\sum AC'=AC_1'+AC_2'$

Source: Fig.2

TABLE 3
Changes in welfare due to the conversion of firms into social business companies: competitive case

	Under profit motive	Under social business motive	Change
Consumer surplus	*ABE*	*AGE''*	Increases by *BGE''E*
Producer surplus	*BCE*	*0*	Decreases by *BCE*
Total surplus	*ACE*	*AGE''*	Ambiguous[3]

Source: Fig.2

[3]Total surplus increases, decreases or remains constant if EFE′′ is greater than, less than or equal to CGF.

decreases. Nevertheless, the consequence can be considered a better state, because typically consumers belong to relatively lower income groups as compared to producers.

In this particular case, the decrease in the social welfare, if there is any, emanates from the decrease in the welfare from the producers' side. This decline in the producers' welfare can be accepted on the ground that the producers willingly forego their surpluses and obtain some sort of mental satisfaction in return.

What would be if the No-entry/exit Assumption is Relaxed

If the assumption of no entry/exit is relaxed, new firms will enter the market with social business motive (according to the assumption of same motive) under the circumstances described above. As a result, the market supply curve $\sum AC$ will shift rightward, leading to a fall in market price. As long as new entry takes place, market price will continue to fall. New entry will stop once the price becomes equal to minimum average cost. The social business motive (no loss, no dividend) does not allow the price to fall below the minimum average cost. Thus, each firm will achieve the equilibrium at the minimum point of its average cost curve.

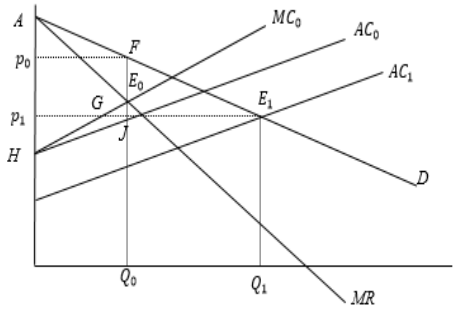

Fig.3 : Firm's equilibrium in a social business framework: monopoly case[4]

MONOPOLY CASE

Firm's Equilibrium

Under the conventional framework, a monopolist produces complying with the decision rule MR=MC to maximise his profit. In Fig.3, the equilibrium of such a monopolist is shown to be at point E_0. The corresponding output level and price are Q_0 and p_0, respectively. As soon as the firm converts into a social business, its average cost curve shifts down from AC_0 to AC_1 for the same reasons as those pointed out in Section 4.3. According to the objective of a social business (no loss, no dividend), MR curve no longer has any relevance in decision making process.

TABLE 4
Equilibrium: traditional monopolist versus social business monopolist

	Equilibrium point	Output	Price	Profit /unit
Traditional motive	E_0	Q_0	p_0	FJ
Social business motive	E_1	Q_1	p_1	0

Source: Fig. 3

[4]Since there is only one firm in a monopoly market, this is also a market equilibrium.

The output decision of the firm begins to be driven by the equality between price and average cost. Fig.3 shows that under the new circumstances, output and price are determined at Q_1 and p_1, respectively. Table 4 presents a comparison between the equilibrium of a traditional monopolist and that of a social business monopolist.

It is important to note that the cost curves in Fig.3 are drawn using straight line to keep the diagram simple. Unnecessary complication seems to arise in illustrating consumer surplus and producer surplus if U-shaped curves are used. In fact, it can be shown that using straight lines does not alter what can be found using U-shaped curves.

Welfare Implications

Table 5 summarises the welfare implications of the decision of a monopolistic firm to convert into social business. After the conversion, the firm forgoes the producer surplus $HE_0\ Fp_0$ as well as normal profit. On the other hand, the consumer surplus obviously increases from $Ap_0\ F$ to $Ap_1\ E_1$ by an amount of $p_0\ p_1\ E_1\ F$. In this case also, it is quite ambiguous whether the total welfare increases or decreases. However, the situation can be considered an improvement regardless, because the consumers, who are mainly from the lower income groups, are now surely better off. In addition, as argued earlier, any decrease in the total social welfare comes from the producer's side. Since the producer forgoes his surplus voluntarily, this decrease should not be seen as a welfare loss. The reason is that personally, the producer does not feel any dissatisfaction due to the surplus reduction.

CONCLUDING REMARKS

Yunus unfolded a new dimensionality in the domain of capitalism by propounding the social business concept. Instead of limiting himself merely to the theory, he went beyond to materialise the idea. At least five companies that are currently in operation in Bangladesh have been established as social business companies under his direct supervision and management. They are Grameen Danone, Grameen Veolia, BASF Grameen, Grameen Intel, and Grameen GC Eye Care Hospital. These companies are producing yogurt, water, mosquito nets, IT products, and eye care services, respectively.

This paper tries to figure out the welfare implications of the social business concept using graphical tools. The analysis reveals that as far as social welfare is concerned, social business companies do much better than traditional business companies. However, ambiguity remains

TABLE 5
Changes in welfare due to the conversion of a traditional monopolist into a social business monopolist

	Under profit motive	Under social business motive	Change
Consumer surplus	$Ap_0\ F$	$Ap_1\ E_1$	Increases by $p_0\ p_1\ E_1\ F$
Producer surplus	$HE_0\ Fp_0$	0	Decreases by $HE_0\ Fp_0$
Social welfare	$AFE_0\ H$	$Ap_1\ E_1$	Ambiguous

if the losses of entrepreneurs and investors are considered losses as such. Nonetheless, since entrepreneurs and investors in the social business world convert their motives willingly, the losses can be supposed not to generate any disutility or negative welfare. In that sense, our conclusion about the welfare effects of social business is compelling.

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