

Conventional Growth Policy and The Forgotten Potential Resource: A Case for the Ethical Economic Resource

SEIF EL-DIN IBRAHIM TAG EL-DIN
Senior Consultant Economist
National Management Consultancy Centre
Jeddah, Saudi Arabia

ABSTRACT. To step up national growth rates, conventional policy makes an exclusive focus on *production function norms* in its human resource strategy. Development of man's ethical economic resource along the religious lines to soften man's selfishness and promote mutual brotherly caring behavior among individuals, proves to add a *utility function norm* which contributes to the creation of a growth-devoted economy. The strong conventional belief that a conflict must arise between a *pure* strategy of economic growth and an *ideal* one of distributinal justice, is rooted in the failure to recognize *man's ethical economic resource* on equal footing with the other strategic growth-conducive human resources. Absence of such a strategy which strongly and positively correlates material growth and distributinal justice, does explain the economic collapse of the former socialist systems that are vainly moving away from the paradigm of economic justice towards growth-oriented capitalist systems.

1. Introduction

This paper shows how a dedicated growth maximizing strategy may attain higher scores from the development of *man's ethical economic resource* along the religious strategy which works to soften greed and selfishness and accordingly promotes mutual brotherly caring attitudes among individual society members. The idea is based on the fact that an undeveloped ethical economic resource may cause a serious utility function externality which may not only dissociate material growth from true welfare, but, more seriously, it may discourage the realization of full growth potential in an economy. The fundamental idea of *ethical utility externalities* is not new, but the strategic growth-related implications of such ethical patterns, to our best knowledge, have not been developed in main-stream economics. Similarly, the idea of possible disparity between material growth and social welfare is not new, but economists have not recognized the state of *man's ethical economic resource* as a major source of such disparity. Still more critically, the larger growth potential that may be achieved through the religious strategy which works to minimize such disparity, is not recognized.

The paper characterizes the religious strategy as one which makes best effort to match higher material growth with greater welfare through promotion of man's ethical economic resource. On this basis, the paper shows how the religious strategy is potentially more capable of yielding a growth-devoted economy than the conventional one. In this sense the religious strategy, at least in theory, proves better equipped to achieve true economic welfare with higher growth rates.

1.1 Sharp Distinction between the Religious and the Conventional Strategies

Any casual observer may easily note the clear contrast between the Revealed Religions and the contemporary policy in the strategy of influencing man's economic attitudes. All Divine Books, the Quran being no exception, adopt a pervasive policy to mitigate selfishness and promote mutual brotherly care among individual society members, whereas secular policy economics, no matter whether of a capitalist or socialist orientation, has conventionally kept away from any formal interference with man's economic attitude towards others (*man's ethical economic resource*).

Yet, it is not true that contemporary policy makes no recourse to soft persuasive means in the way of deliberately re-directing man's economic behavior. A clear case in point is human resource development, a concept that has dominated the scene over recent years. The general rule is that: whenever it is believed capable of making an effective contribution to material well-being, man's economic attitude would formally be addressed, properly manipulated and geared in the desired direction like any real economic resource. For example, *man's productive attitude* is often promoted through the establishment of productivity centers or national productivity campaigns, including public announcement of national productivity days, as part of a real growth strategy⁽¹⁾. A very special case is *man's natural attitude towards family size* which is sometimes re-directed through the promotion of family planning programs in a dedicated strategy to reduce population growth rates. But for no obvious economic theory, conventional policy fails to recognize *man's ethical economic behavior* as a strategic resource in line with other human behavioral resources. Perhaps, it is the inherited belief that the Revealed Religions' deep concern with the promotion of brotherly caring behavior among society members is basically an address to spiritual elevation and inner soul refinement rather than a relevant matter of pragmatic-minded economics.

Accordingly, when faced with the pressing issue of social and economic justice, conventional policy-makers (most particularly socialists) would choose to aggressively enforce a major interventionist role by the state to effectively re-distribute wealth and attack poverty, rather than adopt the religious persuasive strategy within the given

(1) In the modern world, governments are increasingly aware of the strong relationship between real productivity gains and attitudinal values, as it is carefully capitalized through the establishments of national productivity centers. In 1985 the Japanese productivity Center (JPC) celebrated the 30th anniversary of the national productivity movement in Japan, where special programs have been designed to promote productivity consciousness among school children. In Norway a national Productivity campaign had been carried out over the whole year (1978, 1979), in order to regain the country's competitive position in the industrial world. In India, the year (1982) was declared the "productivity year" by the Prime Minister. Similarly in Singapore (November 1985) they declared a "Productivity Month" to promote national consciousness and productivity culture among workers and employees. (Joseph Prokopenko (1987)).

laissez faire economic order. The religious strategy had no appeal even to the pioneering Western economists, like the well-known Cambridge economist A. C. Pigou, who were deeply concerned with the inhumane consequences on social justice of a pure growth-oriented economy. They simply advocated an anti-*laissez faire* strategy, toning down ambitious growth targets and recommending a greater interventionist role by the state to enforce economic justice. The strong belief that trade-off must exist between a pure growth strategy and one of pure distributional justice is clearly rooted in that very tendency to aggressively enforce economic justice at the expense of free economic enterprise.

The main drive for carrying out this kind of analysis is to highlight a critical methodological point in Islamic economics, since the idea of *ethical economic behavior* is a focal point to Islamic economists. In what follows we shall briefly describe our methodology from a perspective of Islamic economics and then proceed to develop our simplified model.

2. The Ethical Economic Resource from the Viewpoint of Islamic Economics

Not only has *man's ethical economic resource* been ignored by Western policy economists, but even Islamic economists who make the Quranic ethical economic teachings their point of departure have not recognized them as *resourceful* tools for use in policy economics. Apart from Chapra (1992) who explicitly recognized the policy orientation of such ethical teachings against the policy directives of both capitalist and socialist systems, the dominant trend in Islamic economics is to view the Quranic teachings mainly as weapons for attacking the theory of *positive economics* for its underlying assumption of *greed and selfishness*. We argue below that this behavioral assumption, which incidentally is admitted by the Quran, must remain a useful working hypothesis at the level of economic analysis. Also, we uphold Chapra's pioneering approach of utilizing the Quranic ethical economic teachings in the build-up of practical economic policy, believing that it is indeed more compatible with the modern economic mentality - which remains preoccupied by the enhancement of material life - than the dominant Islamic anti-positivist theoretical approach.

2.1 The Issue of Methodology

Chapra, however, was not concerned with real growth implications, though he has rightly employed the Quranic economic teachings as basic elements in a dedicated promotional strategy of re-distributional justice. The present paper goes further, employing standard class-room tools, to establish four main results pertaining to the real growth implications of the religious strategy as it assimilates man's ethical resource in the package of human resource development.

Hence, our approach is to take Islamic economics, not as a rival discipline to positive economics as it currently seems to be, but as a unique *system of economic policy deriving its directives from the fundamental Islamic juristic sources, directly or*

indirectly.⁽²⁾ It is more of a rival discipline to conventional economic policy than a theoretical endeavor, as currently perceived by the Islamic anti-positivists, to discredit the *value-free* claim of positive economics. The main challenge to Muslim economists, as we see it, is not to develop their own economic science in parallelism with the received one, but rather to exploit the received tools of scientific analysis in order to discover the *central economic problem* of the received *Shari'ah* system, in contra-distinction with the other conventional policy systems, and to link it with the strategic style which accounts for all the *jurist* orders and prohibitions. In this sense the appeal of positive economics lies in its ability to highlight key policy parameters that may be suitably manipulated to yield *a better life* and not simply being contented (or discontented) with the *hypothetical matter of fact* insights about real life so reflected by the simple models.

Indeed, we can hardly perceive any practical reason why Muslim economists should bother themselves with the *Islamicity* of economics other than the need to face the ever-rising contemporary challenges through well-developed Islamic mentality in the art of economic policy. The art of developing testable economic theories is the headache of positive economists to which we may also contribute, but our main headache must remain *to detect the relevant policy implication of standard results* and this is what the present paper does.

2.2 Irrelevance of Islamic anti-positivism

The Islamic anti-positivist approach is most notably exemplified by the contributions of Choudhury (86,89,92), who pleads for a complete rejection of positive economics, to be replaced by the build-up of a parallel paradigm for Islamic economics around the ethical foundations of *humanomic*. Though interesting in its own right as a new philosophical discipline, Choudhury's proposed humanitarian philosophy is not well-equipped to make an intuitively simple and clear point to an undergraduate student of economics, or contribute to the professional dialogue which still remains dominated by the standard pragmatic jargon of material-minded neo-classical economists. Similar remarks relate to the ideas of Asad Zaman (1991) who strongly discredits the methodology of positive economics on grounds that it is "loaded with value judgments which are antithetical to Islam". The methodological ideas due to Zarqa (1992) and Mohammed Anwar (1991), also revolve around the same anti-positivist lines.

However, it can be shown that such Islamic value-loaded attack on the theory of positive economics is both ill-advised and irrelevant since the Quran itself unambiguously recognizes the positivist *matter of fact* insight on man's economic behavior as *naturally* greedy and selfish, a point which is consistently repeated in various Quranic verses, like:

(2) The fundamental Islamic juristic sources are: The Quran, The Prophet's Traditions, consensus of jurists, and analogy. Note that this definition is a slight modification of a similar one due to **Tag el-Din** (1994).

- “If ye had control of the treasures of the mercy of my Lord , behold, you would keep them back for fear of spending them, for man is ever niggardly” (Sura 17, v. 100).
- Or “If a wife fears cruelty or desertion on her husband’s part there is no blame on them if they arrange an amicable settlement between themselves. And such settlement is best, for men’s souls are swayed by greed” (Sura 3, v.128, A. Yousuf Ali translation with slight refinement).

Note that the main Quranic wisdom for requesting a material concessionary settlement by a wife to her husband is rooted in its recognition of man’s greed and selfishness. Indeed, it is difficult to appreciate much of the economic orders and prohibitions by *Shari’ah* as purposeful economic policy without admitting, as a scientific working hypothesis, the positive economist’s judgment that man is *naturally* selfish and greedy. But like other revealed religions, *Shari’ah* resorts to a persuasive human resource strategy in order to reasonably soften man’s selfish and greedy attitude, although it is recognized that greed and selfishness are necessary facts of life that cannot and must not be totally up-rooted. This strategy underlies much of the prohibited practices. For example: prohibition of usury practices in their various forms, harmful monopoly, extravagance (*Israf*), accumulation of gold and silver (*Iktinaz*), catching-up trade caravans before they reach the market place, or enforcement of Zakah, all of which must emerge as policy recommendations from basic theoretical models of the standard neoclassical type.

No doubt, the admitted historical relevance of selfishness/greed as suitable working hypothesis to the Medina Society at a time when it embraced the Prophet (PBUH) and his faithful companions, makes the point even much stronger to our present time. In the final analysis what really matters is not how we feel as Muslims towards a positivist theoretical insight on real life, but it is how we react towards the unpleasant realities so reflected. The decisive issue comes only at the level of policy-making, depending on the *extent to which such matter of fact insight constitutes a worthwhile warning from the economist’s viewpoint to deem corrective measures, and how?* This paper focuses only on the warning that relates to the failure of a pure growth policy to *pragmatically* tap a forgotten potential human resource.

3. Growth Policy and the Utility Function Norm

First we have to demonstrate the deep religious concern with the development of *man’s ethical economic resource* as a special effort to secure better matching between material growth and true welfare. At a later stage we show how such a strategy leads to a better *growth-devoted economy* than the conventional growth strategy which focuses exclusively on *production function norms*. By production function norms we mean any set of growth-conducive directives purposefully devised to upgrade man’s productive behavior, and reflect directly on the production function, e.g. industrial productivity campaigns, establishing national productivity centers, announcing a National Productivity Day.. etc. The analytical relevance of production function norms to the real growth policy is easily traced through a downward shift in the economic firm’s isoquants.

By symmetry, we can define another set of directives purposefully defined to reflect on man's utility function (i.e. *utility function norms*) in an effort to strike maximum matching between true welfare gains and material growth. Unsurprisingly, these utility function norms are nothing but the religious ethical directives aiming at developing *man's ethical economic resource*. Interestingly, we show in the next section that such *utility function norms* are as much growth-conducive as the production function norms, and hence from sheer pragmatic viewpoint, there will be no scientific justification for conventional growth policy to emphasize the latter and ignore the former.

3.1 The Assumed Environment

We assume a simple closed economy in a competitive long term equilibrium with fixed capital stock K , a given size of fully-employed labour force L , and a given state of technology. Only two normal goods (X_1, X_2) are produced and consumed under unchanging demand condition, in addition to a capital good industry only supplying replacement capital. Both good and resource markets are assumed perfectly competitive. In this simplified set-up money incomes consist only of labour wage (w) and return on capital (r) since pure profits cease to exist in the long run. Obviously it is a zero growth economy which is consistent with assuming homogeneous production functions of degree 1.

3.2 The Conventional Growth Policy Model

Suppose, under the above environmental set-up a hypothetical conventional government has adopted a medium-term real growth target (10%) for the consumer goods output focusing only on *production function norms*. Since it is a full-employment economy with given state of technology and fixed capital resource per firm, there is only one possible approach for achieving the growth target. Namely, through raising labour productivity. Under the assumed conditions this is only attainable through raising the value of the efficiency index parameter Θ of the representative firm's production function, $f(L, K; \Theta)$, which is assumed for convenience to take the simple multiplicative form as:

$$f(L, k; \Theta) = \Theta p(l, k) \quad [1]$$

Note that the marginal productivity for both labour (L) and Capital (K) can be decomposed into a pure efficiency component and a pure technical component as:

$$\begin{aligned} \partial f / \partial L &= \Theta \partial p / \partial L > 0 \\ \text{and } \partial f &= \Theta \partial p / \partial K > 0 \end{aligned} \quad [2]$$

At the given state of technology, the technical productivity components $\partial p / \partial L$, or $\partial p / \partial K$ cannot be changed, whereas it is feasible to raise Θ through a policy prescription of *human resource development*. The quantities of labour and capital inputs (L_0, K_0) would remain unchanged due to the fixed financial constraint per firm. The underlying policy package has been designed such that they raise the efficiency parameter (Θ_0) of the representative firm's production function, viz.:

$$f(L_0, K_0) = \Theta_0, p(L_0, K_0) \quad [3]$$

which used to prevail during the static long term equilibrium, to a new targeted value Θ_1 , yielding the new production function:

$$f(L_0, K_0) = \Theta_1, p(L_0, K_0) \quad [4]$$

Note that $\Theta_1 > \Theta_0$ as a result of the productivity campaign.

3.3 The Shift Parameter of Firm's Isoquants:

It is a simple matter to show the immediate effect of the above-mentioned growth policy on the family of a representative firm's isoquants. Since the amounts of labour and capital (L_0, K_0) have remained unchanged, while wage-rate (w) and return/unit capital (r) are given under the competitive conditions, then the firm's *isocost* would also remain fixed at its pre-growth level.

$$C_0 = w L_0 + r K_0 \quad [5]$$

The pre-growth and post-growth equilibrium positions for the representative firm are shown in Figure 1 (a) and (b) respectively. The figure reveals the effect of raising the efficiency parameter Θ_0 which acts through equations [3] and [4], as a shift parameter. Hence the direct effect of the growth policy is a *downward* shift of the isoquants' family, such that at the fixed isocost (equation [5]), the firm is able to raise its production level by 10%.

Also note that at the assumed zero pure profit equilibrium, the firm's output would be shared *exhaustively* between labour and capital suppliers. This situation is consistent with constant returns to scale i.e. the firm's production function is homogeneous of degree 1. And since it is known for such type of production function that the *expansion path* rises linearly from the point of origin, the *downward shifting of isoquants shall not alter the pre-growth optimal resource* (L_0, K_0).

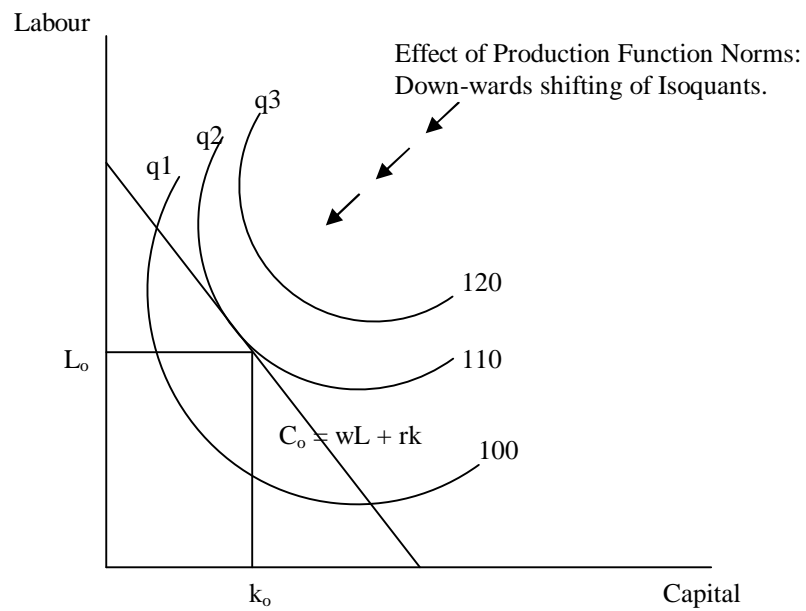
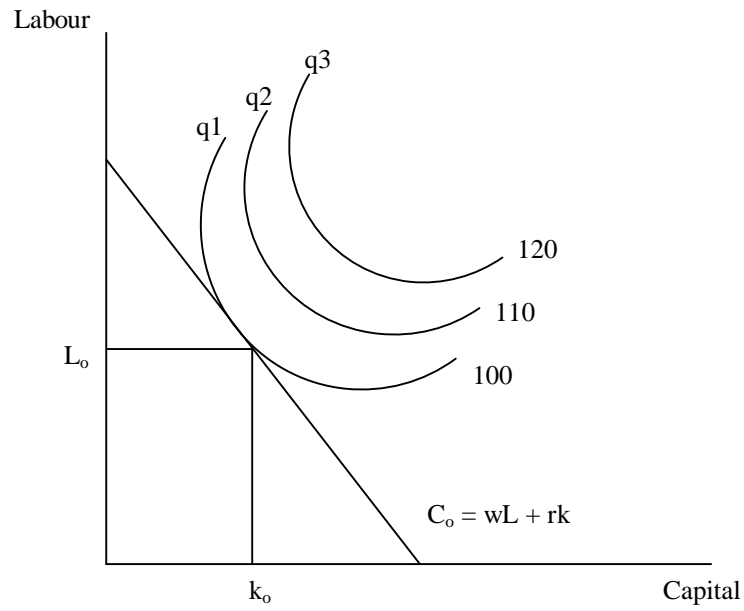


Figure (1)

3.4 Achievement of Ultimate Welfare Goal under the Standard Model

Since the hypothetical government has not manipulated the stock of money or any fiscal tools (e.g. taxes), the achieved growth in the output of consumption goods would reflect merely in *falling* commodity prices for the commodities (X_1 , X_2). Per capita money income of the *representative commodity* could be any possible combination of labour wage and return on capital depending on his productive resource contributions. Given that both wage-rate (w) and return/unit on capital (r) are already fixed in money terms, real income, however, will go up due to the fall in commodity prices (p_1 , p_2) as a result of the 10% growth in the level of consumer goods output. Hence, at the fixed money incomes, consumers are now able to buy *more* goods than before.

The ultimate goal for economic growth, which is to raise satisfaction levels for consumers, is also automatically achieved under the utility structure of Figure 2 (a) and (b), which represents the standard textbook consumer equilibrium. Figure 2 (a) describes the *pre-growth* static equilibrium for a consumer with fixed income Y , whereas Figure 2 (b) shows the new post-growth static equilibrium caused by upward shifting of the income line:

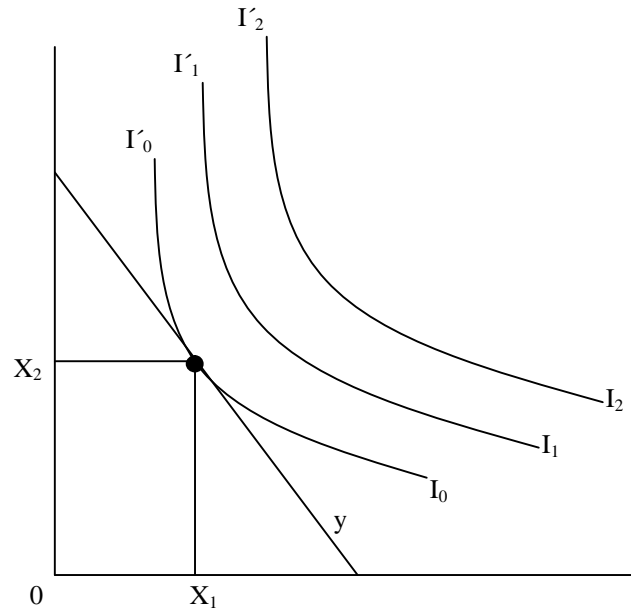
$$Y = p_1 X_1 + p_2 X_2 + \text{const.}$$

due to uniform fall of prices (p_1 , p_2) i.e. rise in real income. This shows the familiar standard text book result where the representative consumer automatically attains higher level of satisfaction due to income rise. On this basis it can be claimed that *growth policy has automatically attained its ultimate goal*.

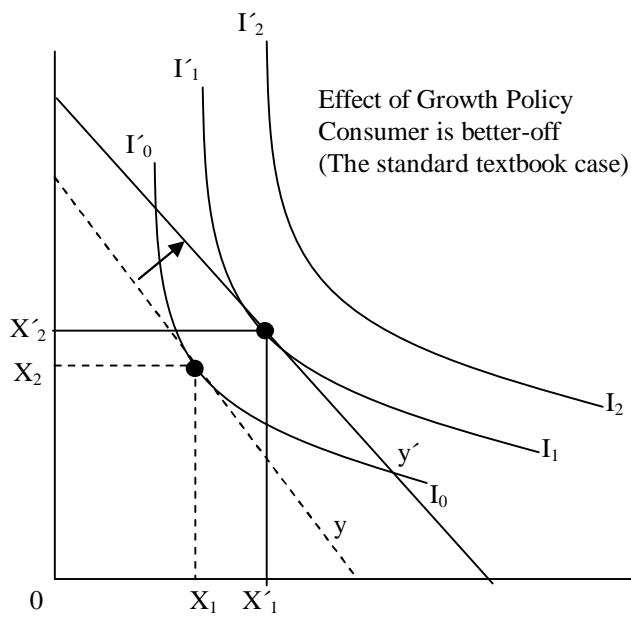
3.5 Welfare Mismatching and the Religious Strategy

It is well-documented in main-stream economics that the preceding standard text-book result, which perfectly matches higher income with higher utility (i.e. welfare gains), depends critically upon absence of various externalities which prevent higher incomes from representing higher utilities. The theoretical assumption that individuals' indifference curves' structure would remain sufficiently stable to reap welfare gains, is open in real life to a wide range of unpredictable and hardly controllable sources of external factors.

Yet, the main distinguishing element of the religious strategy is to target the best possible matching of material growth with true welfare. The best strategy for such a target is to induce *downward shifting in the individuals' indifference curves' structure through the promotion of an appropriate utility function norm*. Such a strategy provides a strong safeguard against serious situations of welfare/growth mismatching as shown Figure 3. The figure shows a situation of welfare loss where the whole indifference curve's family is shifted upwards to a larger extent than the real growth in income. Interestingly the utility function norm which may yield such downward shifting relates to man's ethical economic resource and this is precisely the policy control parameter adopted by the religious strategy. Hence we conclude this section with the following result:



a) Pregrowth



b) Post-growth

Figure (2)

RESULT (1): *To strike the best possible matching between real growth and true economic welfare, the religious strategy does not only work to affect a downward shift in a representative firm's isoquant family, but it also works to affect a downward shift of individuals' indifference curve's families.*

Thus, by symmetry with the efficiency parameter of the isoquants' family, Θ , we must ascertain the ethical resource nature of the indifference curves' shift parameter being used in the religious strategy as a policy control parameter.

4. The Shift Parameter of the Indifference Curves' Structure

Now we have to examine the ethical resource nature of the shift parameter that may destabilize the individual's indifference curves' structure at the post-growth state. By definition, the shift parameter must depend on *external* utility-disturbing elements that do not relate to the representative consumer's goods. Thus, the shift parameter must be an integral component of the consumer's subjective utility structure. The direct incidence of growth is to *stimulate* such elements, which in turn disturb utility. Thus, we would have to define the a *generalized utility function* for any given individual at the pre-growth static stage, as depending not only on consumer goods (X_1, X_2) but also on the relevant external elements.

4.1 The External Utility-Disturbing Elements

The direct effect of macroeconomic growth is to raise real income levels of all society members and this by itself is the stimulant of external utility-disturbing elements. However, we should avoid the case of distributionally biased macroeconomic growth which stimulates social class prejudices as a possible disturbing factor. To assume away distributional distortions and prejudices, we shall maintain that it is a *fair growth* increasing all income levels at a uniform rate leaving the relative income distributional structure unaffected. We have deliberately assumed away any distributional change in order to focus exclusively on the *given* pre-growth distributional structure as the only possible source of external influence on individuals' utility structures. To develop this point further, we shall assume only three income brackets during the static pre-growth stage as follows:

1. Upper income bracket (average = S_1)
2. Middle income bracket (average = S_2)
3. Lower income bracket(average = S_3)

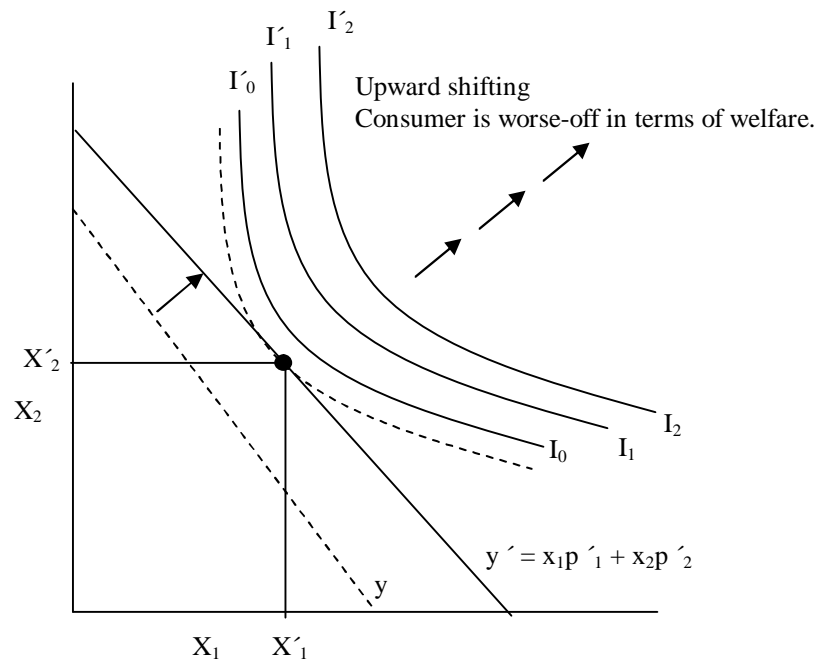
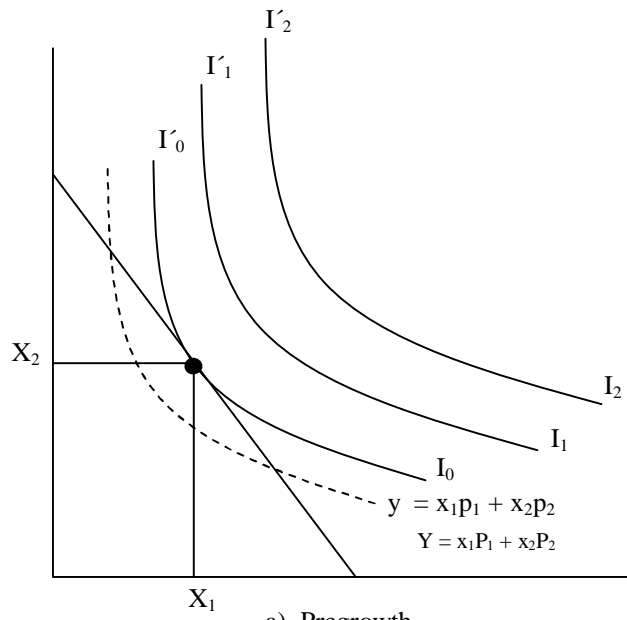


Figure (3)

It is also assumed that information about these parameters is costless, implying that all individual society members are fully aware of the distributional parameters (S_1, S_2, S_3) which act as external utility-disturbing elements. Costless information is a familiar assumption in simplified economic modeling though it is highly restrictive. The effect of these external elements is to yield a *general state of satisfaction* for any typical individual society member during the stable pre-growth equilibrium. Although growth policy is assumed distributionally neutral, it is interesting to note that the parameters (S_1, S_2, S_3) still provoke different reactions in the individual's utility functions. For simplicity, we shall focus on a representative middle class society member (with average income = S_2) so that the external effect will be captured by the two parameters S_1, S_3 .

4.2 The Generalized Utility Function

The neo-classical approach deals with the analysis of consumer satisfaction within the limited household context, hence relegating *externalities* only to a secondary role. In this manner, the sources of an individual's satisfaction is confined within his own household boundaries, an assumption which is too restrictive and indeed unrealistic. Our *generalized utility function*, allows for the real life fact that an individual's state of welfare is not only determined by his own basket of consumption goods, but also by external elements affecting the welfare of other society members. Hence, we define the generalized utility function for a middle class consumer, conveniently, with a separability restriction, as

$$u(X_1, X_2, S_1, S_3) = U(X_1, X_2) + V(S_1, S_3) \quad [6]$$

Where $U(X_1, X_2)$ is the conventional neo-classical utility function satisfying the standard first-order and second order conditions. The additional utility component $V(S_1, S_3)$ captures the effect of the external economic order on the given individual, and this is the very component which will act as a *shift parameter*. As such the generalized utility function consists of:

- A) A household utility component = $U(X_1, X_2)$
- B) An external utility component = $V(S_1, S_3)$

both of which are necessary for determining individual's *general state of satisfaction* at any given point of time. In this sense the individual's scale of preference does not only relate to his choice of the most preferred commodity mix (X_1, X_2), but it also relates to what the individual (as a social-being) considers as the *preferable* economic order in terms of the parametric mix (S_1, S_3). And whereas the optimal commodity mix (X_1, X_2) is governed by subjective *taste*, it is shown here that the individual's desirable parametric mix (S_1, S_3) is explained by his *economic ethical type*.

4.3 The Structure of the Shift Parameter V

It is already clear that the structure of the utility component $V(S_1, S_3)$ which acts as a shift parameter depends on the individual's economic ethical type. The graphical representation of $V(S_1, S_3)$ exploits the fact that S_1 and S_3 are represented on a single scale ($0 < S_1 < S_3 < \infty$). Here, we shall restrict our attention to the three types shown in Figure 4:

i) The neutral type (or N-type): This is the standard neo-classical consumer, satisfying the conditions:-

$$\partial v / \partial S_1 = \partial v / \partial S_3 = 0 \quad [7]$$

represented by horizontal line, staying as a boundary case between the two economic ethical types. He is completely unconcerned with others.

ii) The Envious type (or E-type): He obeys the conditions:

$$\partial v / \partial S_1 = 0, \text{ but } \partial v / \partial S_3 < 0 \quad [8]$$

possessing a non-increasing quasi-concave function $V(S)$, reflecting a negative ethical altitude towards upper class brackets and no concern with lower class brackets.

iii) The Caring type (or C-type): He satisfies the conditions:

$$\partial v / \partial S_1 > 0, \text{ but } \partial v / \partial S_3 = 0 \quad [9]$$

possessing a non-decreasing quasi-concave function, reflecting a positive ethical attitude towards lower income brackets and no concern with upper class bracket.

In all three cases we have $0 < S_1 < S_3 < \infty$. Particularly for E-type and C-type individuals it is further assumed that:

$$\partial^2 V / \partial S^2 < 0 \quad [10]$$

which is the condition of quasi-concavity for the $V(\cdot)$ function. Then, on the basis of equations [7] to [10] we may define the generalized utility functions respectively as follows:-

$$u(S_1, S_2, X_1, X_2) = \begin{cases} a + U(X_1, X_2) & \text{N - type} \\ V(S_2) + U(X_1, X_2) & \text{E - Type} \\ V(S_1) + U(X_1, X_2) & \text{C - Type} \end{cases} \quad [11]$$

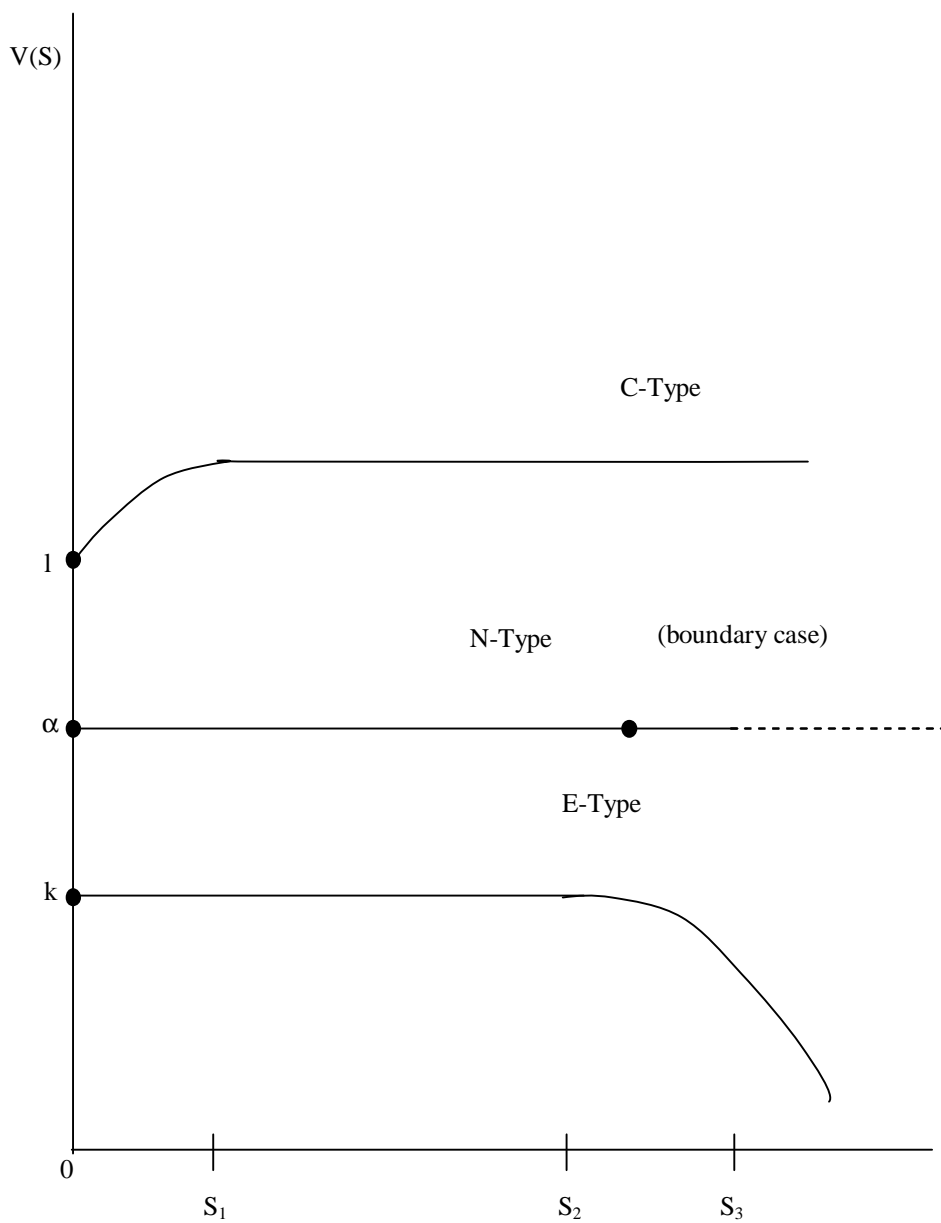


Figure (4)

NB: The constants α , k , l are arbitrary points of origin for $V(S)$ forms.

4.4 Operation of the Shift Parameter

Since all three possible utility structures (E,C and N) may co-exist during the pre-growth stage, they should reflect different potential reactions at the post-growth stage. During the pre-growth static state all the parameters (S_1, S_2, S_3) are fixed and hence all three types of utility structures remain stable. However, at the post-growth period the utility component V acts as a shift parameter to the whole family of indifference curves, depending on the socio-ethical type. With the exception of the N-type whose indifference curves structure remains unaffected, we encounter downwards shift in case of the C-type, and upwards shift in case of E-type.

The mathematical proof for such shifts is worked out in the APPENDIX on whose basis we provide the following concluding result:

RESULT (2): *Downwards shifting of individuals' indifference curves structure requires developing of individuals' ethical economic resource towards the C-Type, and this is precisely what is adopted by the revealed religions.*

5. Rival Human Resource Development Strategies

The central issue from the viewpoint of a sustained growth policy is how to efficiently mobilize, utilize, and develop the necessary economic resources (real, monetary, or human), to raise up man's standard of living. More recently, greater emphasis has been placed on *human resource development*, inspired by past experience which proved the human factor to be the most powerful economic resource in development planning. Modern strategies of human resource development are mainly designed to promote man's economic faculties and capabilities which help improve his material well-being. Here, we implicitly assume that the designers of the *pure growth* strategy are genuinely pragmatic in their search for a self-sustained growth-devoted economy, and hence they place due emphasis on the human resource.

The question is whether a growth-devoted economy can be achieved through a policy of human resource development focusing only upon production function norms, to the neglect of utility function norms as previously defined. To answer this question we shall compare two growth-oriented human resource development strategies: *the conventional one* which focuses only upon production function norms *and the suggested one* which also adds the utility function norms. We shall proceed with our previously described simple hypothetical economy, adding to it the following three qualifications:

- a) The economy is ruled by a political economist who is devoted to the pure strategy of maximizing the communities' total output Z .
- b) Output Z is exhaustively divided between the labour force L which consists of economically independent individuals L , such that the individual gets a share Z of the total output.
- c) Every individual strives hard to raise-up his living standard to the highest possible level.

On the above basis, we shall compare the two rival growth strategies:

A- The Conventional Persuasive Strategy:

The ruler is only concerned with raising the human efficiency parameter Θ through a persuasive productivity campaign, believing that the ethical economic parameter V is irrelevant. That is, he focuses on *production function norms* but ignores the *utility function norms*.

B- The Religious Persuasive Strategy:

The ruler is concerned with raising the efficiency parameter Θ as well as achieving a C-type for the ethical economic parameter V , in order to guard against undesirable shifting of individuals' indifference curves' families. That is, *he adopts both production and utility function norms*.

5.1 The Basic Model

We shall compare the two growth strategies **A** and **B**, and hence find out the one most capable to create a growth-devoted economy and meet individuals' desire for higher incomes. Note that the *ith* individual may fulfill his desire for more income through one of the following two alternative means:

Option A: Seek a best effort distributional favour, to enlarge his own share from the fixed output.

Option B: Combine his effort with other individuals to raise the level of output (macroeconomic growth).

No doubt, the preferred strategy would be the one which succeeds in persuading individuals to choose the growth alternative (option b), rather than distributional favour. Obviously, the choice between the above two alternative options must depend on the individual's ethical economic type, and for this purpose we need to develop suitable indifference curves to represent the three ethical types (N, E, C). The required indifference curves must be defined within the (Y, S)-space where Y stands for *own-income* and S stands for *others' income*. As expected, the (Y, S)-indifference curves are close to the mirror images of their respective utility structures $V(\cdot)$, as shown in Figure(5) i, ii, iii - the proof is deferred to the APPENDIX.

Figure (5) provides a separate model of (Y, S)-indifference curves' family for each one of the three possible representations of the *ith* individual with a fixed income share.

Family of (Y, S) – In difference Curves for three ethical types

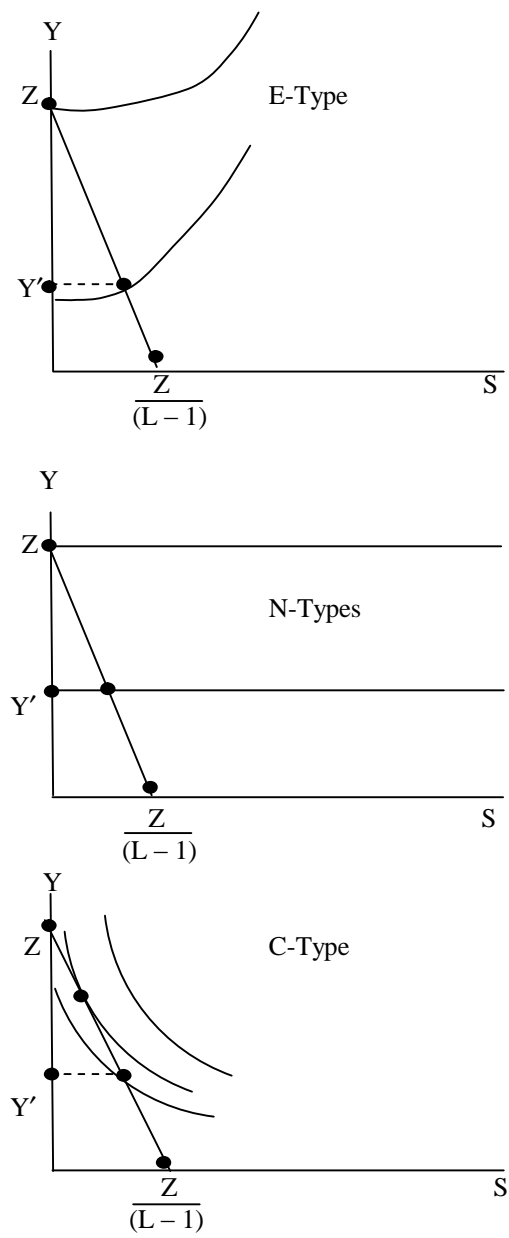


Figure (5)

The *output constraint* is inserted within the (Y, S)-space to allow for constrained utility maximization under a zero-growth model. The vertical axis represents the level of the *ith* individual's own-income share, Y^i , in the fixed output level Z , whereas the horizontal axis represents for the other (L-1) individuals the average level of per capita income, S . Note that in all three cases the individual has not attained his utility maximizing income. In this zero growth model, regardless of his socio-ethical type, the *ith* individual is always better-off with a *distributional favour* (option a).

5.2 The Comparative Analysis with the Growth Option

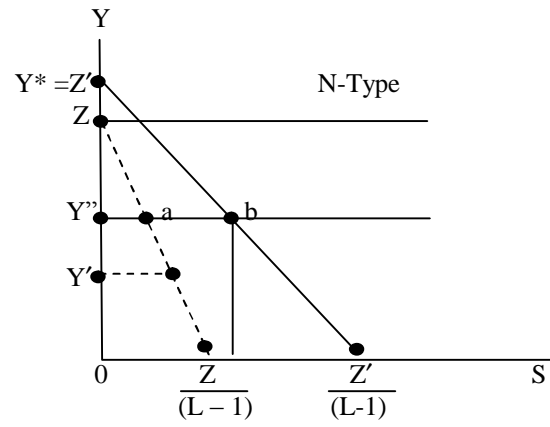
Next, we introduce the growth option, whereby the output constraint must be shifted upwards to show a higher output level $Z' > Z$ resulting potentially from macroeconomic growth. The idea is to show how choice by the *ith* individual's will be affected.

Starting with strategy A which neglects the ethical parameter V as being irrelevant for real growth, we are led to represent the *ith* individual mostly as either an N-type or E-type: see Figure 6, i, ii. Note that both N-type and E-type individuals maximize utility at the upper vertex of the triangle, i.e. the income Y^* is the whole output, Z . The points a and b stand for the two objects of choice, i.e. *distributional favour* against *macroeconomic growth* for N-type and E-type individuals respectively, as below:

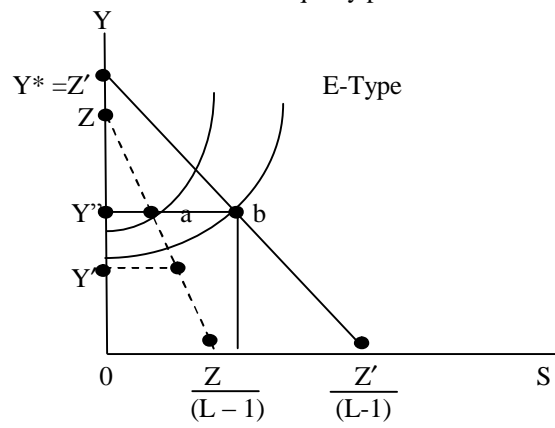
- i. The N-Type: Here a and b fall on the same horizontal (Z, S)-indifference curve implying that the two alternatives are equally attractive.
- ii. The E-Type: Here b falls on a lower indifference curve than a. He would, thus, prefer distributional favour rather than growth.

That is, the conventional strategy fails to produce a growth-devoted economy. Next, we consider the religious strategy B, which deliberately manipulates individuals' ethical values to produce C-type individuals who possess convex (Y, S)-indifference curves from below. Looking at Figure 6 iii, we find that the growth option (point b) now lies on a higher indifference curve relative to point a. Therefore, we are led to the following result:

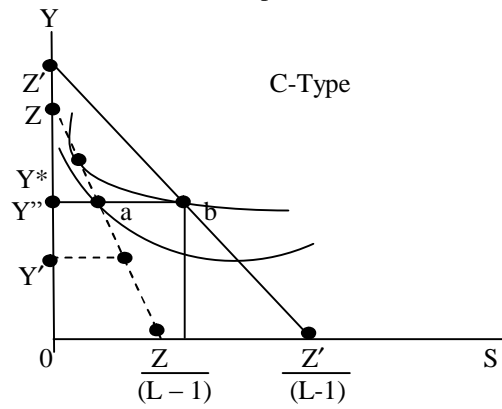
RESULT (3): *The religious human resource development strategy which combines both production function and utility function norms is more capable of creating a growth-devoted economy than the conventional policy which focuses only on production function norms.*



Equally preferred.



(a) preferred to (b).



(b) preferred to (a).

Figure (6)

5.3 The Missing Link

The above result is particularly interesting not only due to its growth-oriented implications but also in the context of distributional justice. We have just seen how the religious strategy develops individuals of the C-type who are by definition non-selfish, a property that has accounted for the avoidance of a *distributional favour* when a growth option exists. No doubt this is a fundamental requisite of a *justice-devoted* economy, deplorably neglected by conventional advocates of economic justice as already shown by Chapra. The socialist experience is a case in point as it is now retreating from its theoretical ideals of distributional justice, moving closer to a growth-oriented free market system, mainly due to its neglect of the strategic link (i.e. *man's ethical economic resource*) between the seemingly conflicting goals. However, it was not clear to the conventional policy economists that the mobilization of man's ethical economic resource renders the growth-devoted and justice devoted properties two faces of the same coin. In other words the following result must be true as a corollary of the last result:

RESULT (4): *The apparent conflict between pure growth and pure strategies, as rightly recognized by the conventional policy-makers, is rooted in the very neglect of the religious human resource development strategy which strongly and positively correlates growth-devotion and justice-devotion through the appropriate manipulation of man's ethical economic resource.*

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Appendix

The objective is to show how a family of consumer(X_1, X_2)-indifference curves may shift due to economic growth using the generalized utility function:

$$u(S, X_1, X_2) = v(s) + U(X_1, X_2) \quad [A1]$$

under the assumed static state conditions and the quasi-concavity properties of $v(S)$ and $U(X_1, X_2)$ that during the *pre-growth* static state we always have, for any consumer:

$$V(S) = a_0 \quad (\text{any constant}) \quad [A2]$$

Since the *ordinal* utility function $U(X_1, X_2)$ is unique up to any monotonic increasing transformation, $\phi(U)$, each indifference curve (e.g. I_0) can be assigned a unique number (e.g. u_0) in terms of the generalized utility function, subject to any arbitrarily fixed value $v(s) = a_0$ and any assigned number $U(X_1, X_2) = U_0$. However to preserve its consistency, it is important to assume that *once chosen, the individual's scale of preference would not be exposed to further transformation*. The idea is to locate a unique position for any indifference curve at the *pre-growth* stage and see how this position changes at the *post-growth* stage.

Then, consider the family of indifference curves in Figure (A1). Each individual member of this family (e.g. I_0) represents a specific utility level (e.g. $u = u_0$) of the generalized utility production, such that:

$$u_0 = a_0 + U(X_1, X_2) \quad [A3]$$

for an infinite class of possible commodity combinations $\{(X_1, X_2)\}$, where $0 < X_1, X_2 < \infty$ yielding the fixed u_0 , no matter whether the consumer is of the N or E or C-type.

The case of C-type Consumer

Without loss of generality we shall verify the shifting property of indifference curves' family with special reference to the C-type consumer (page (21)). Let the specific commodity combination (X^*_1, X^*_2) , $0 < X^*_1, X^*_2 < \infty$, be any fixed point defined on the indifference curve (I_0). Then during the pre-growth state where $V(S_1) = a_0$ we have:

$$u_0 = a_0 + U_0(X^*_1, X^*_2) \quad [A4]$$

Next, when growth is introduced the value of $V(S_1) = a_0$ goes up to a higher value $v(S_1) = a_1$ to the socio-ethical property that*:

$$\partial V / \partial S_1 > 0$$

And since $a_1 > a_0$, equation [A4] turns into an inequality as:

$$U_0 < a_1 + U_0(X^*_1, X^*_2) \quad [A5]$$

implying that the commodity combination (X^*_1, X^*_2) no longer falls on the indifference curve (I_0) as it used to be. And since the point (X^*_1, X^*_2) is always fixed within the (X_1, X_2) -space, *the indifference curve (I_0) must have changed its pre-growth position*. It now remains to show the direction in which (I_0) has moved.

For this purpose let (X_1, X_2) be any point falling on the indifference curve (I_0) after it has moved to the new *post-growth* position. This implies that:

$$U_0 = a_1 + U_1(X_1, X_2) \quad [A6]$$

Hence from equation [A4] we find that:

$$U_1(X_1, X_2) > U_0(X^*, X^*) \quad [A7]$$

The last inequality [A7] can be satisfied by any fixed point (X_1, X_2) satisfying

$$\begin{aligned} X_1 &< X^*_1 \\ X_2 &< X^*_2 \end{aligned} \quad [A8]$$

This in turn implies that the *post-growth* point (X_1, X_2) is closer to the origin than (X^*_1, X^*_2) , which is true for any possible fixed position (X^*_1, X^*_2) within the range $0 < X^*_1, X^*_2 < \infty$ defined at the *pre-growth* stage on the given indifference curve.

Therefore any such point as (X_1, X_2) defined by conditions [A8], will be closer to the origin than its corresponding pre-growth point (X^*_1, X^*_2) . *That is, the indifference curve (I_0) has already moved downwards towards the origin.*

The same analysis can be repeated for every family member $(I_1, I_2 \dots \text{etc.})$, thus, concluding that the whole family has shifted downwards towards the origin.

The (Y,S)-Indifference Curves

The derivation of (Y,S)-indifference curves has to be based on *the indirect utility function* of the generalized form. The income-constrained maximum of the generalized utility function is a function of the consumer's income Y and the given commodity prices, as well as the relevant S parameter. In this sense we may define *the generalized indirect utility function*, as a function of Y, S and the prices:

$$\begin{aligned} u(Y, S, p_1, p_2) &= V(S) + U(X^*_1, X^*_2) + \beta (Y - p_1 X^*_1 - p_2 X^*_2) \\ &= V(s) + U(Y, p_1, p_2) \end{aligned} \quad [A9]$$

where $X^*_i = X^*_i(Y, p_1, p_2)$ are the commodity demand equations ($I = 1, 2$) derived from the income constrained maximization of the generalized utility function and the parameters β is the Lagarange multiplier. Since the prices (p_1, p_2) are held fixed, we shall hence focus on the (Y,S) profile. This leaves us with the simpler indirect utility function:

$$u(Y,S) = v(s) + u(y) \quad 0 < y < \infty, \quad 0 < S < \infty \quad [A10]$$

under the conditions:

$$\begin{aligned} (a) \quad & \partial u / \partial y > 0, \quad \partial^2 u / \partial Y^2 < 0 \\ (b) \quad & \partial u / \partial S \leq 0, \quad \partial^2 u / \partial S^2 < 0 \end{aligned} \quad [A11]$$

Condition (a) stipulates positive marginal utility of income with quasi-concavity property for $u(Y)$. Condition (b) allows for the three possible ethical prototypes (E,N, C) and also stipulates quasi-concavity (see equation [10]). The slope of the (Y,S) indifference curve is obtained through solving the total derivative equation for any fixed level $u = u_0$ as follows:

$$du_0 = (\partial u / \partial Y) dy + (\partial u / \partial S) ds = 0$$

$$\text{Hence } (dy / ds)_{u_0} = -(\partial u / \partial S) / (\partial u / \partial Y) \geq 0 \quad [A12]$$

So that

$$(dy / ds)_{u_0} \begin{cases} = 0 & \text{N - type} \\ \leq 0 & \text{E - type} \\ \geq 0 & \text{C - type} \end{cases} \quad [A13]$$

As expected, the N-type possesses a perfectly horizontal (Y,S)-indifference curve. The objective is to prove that the (Y,S)-indifference curve is quasi-convex to the origin, for both E-type and C-type:

$$(d^2y / ds^2)_{u_0} \geq 0 \quad [A14]$$

Defining u_s and u_{ss} , respectively, as the first and second order partial derivatives, already know that

$$u_s \begin{cases} \leq 0 & \text{E - type} \\ \geq 0 & \text{C - type} \end{cases}$$

whereas:

$$u_{ss} \geq 0 \quad \text{for both E and C types.}$$

Recalling that the slope of the (Y, S)-indifference curve has been ascertained as

$$(d^2y / ds^2)u_o = (u_s / u_y)$$

where u_y is the marginal utility of income. Therefore,

$$\begin{aligned} (d^2y / ds^2)u_o &= -(I / u_y) [u_y(du_s / ds) - u_s (du_y / ds)] \\ &= -(I / u_y) [u_{ss} (u_y)^2 - u_{sy} (u_y)(u_s) + u_{yy} (u_s)^2] \\ &= -(I / u_y)^2 [u_{ss} (u_y)^2 + u_{yy} (u_s)^2] \geq 0 \end{aligned}$$

since $u_{sy} = 0$ due to the additive property of the generalized utility function. Note that in the very special case of constant marginal utility of income ($u_{yy} = 0$) we have:

$$(d^2y / ds^2)u_o = -(I / u_y) u_{ss} \geq 0$$

implying that (Y,S)-indifference curve is a *simple mirror image of the utility component* $V(S)$. More generally, given that income utility function is quasi-concave with the property $u_{yy} \geq 0$, the quasi convexity property of (Y, S)-indifference curves must hold without necessarily being the mirror images of $V(S)$.

السياسة التقليدية للنمو والموارد المنسيّ : الحجج المؤيدة للمورد الاقتصادي الأخلاقي

سيف الدين إبراهيم تاج الدين
مستشار اقتصادي - المركز الوطني للاستشارات
جدة - المملكة العربية السعودية

المستخلص : تركز السياسة التقليدية للنمو على معايير دالة الإنتاج فيما يتعلق باستراتيجية الموارد البشرية. لكن من الممكن تنمية الموارد الأخلاقية لدى البشر على أساس ديني للتخفيف من الأنانية وتشجيع العلاقات الأخوية التعاونية بين الأفراد، الأمر الذي سيضيف معياراً مبنياً على دالة المصلحة، مما يساهم في تكوين اقتصاد هادف إلى النمو.

هناك فكرة تقليدية ترى حتمية التعارض بين استراتيجية تبتغي النمو المحض وأخرى مثالية تبتغي العدالة في التوزيع. ويكمن خطأ هذه الفكرة التقليدية في عدم ملاحظتها وجود مورد اقتصادي أخلاقي في الإنسان لا يقل عن الموارد البشرية الأخرى الأساسية للنمو. ويرى الباحث أن فقدان استراتيجية تربط بقوة بين النمو المادي والعدالة في التوزيع هو السبب في انهيار الأنظمة الاشتراكية السابقة، التي بدأت بلدانها الآن تتعد عن إطار العدالة الاقتصادية وتتجه صوب الأنظمة الرأسمالية الهادفة إلى النمو.