FIGURE 1: TECHNICAL AND ALLOCATIVE INEFFICIENCY

Figure 1 illustrates this point. Assuming a simple technology using two inputs (x_1 and x_2, whose prices are W_1 and W_2 respectively) to produce one output, the units on the boundary of the input requirement set, BB', are technically efficient since it is not possible to further reduce simultaneously the use of all inputs. However, the units lying on the boundary are not equivalent in terms of allocative inefficiency. According to the definition used by Schmidt and Lovell (1979), a producer is allocatively efficient if it succeeds to allocate inputs in such a way to equate the marginal rates of technical substitution to the ratio of the respective input prices. The optimal input boundle is given by point F, i.e. the tangency point between the boundary BB' and the isocost line, whose slope is given by W_1/W_2. On the contrary, unit E – though technically efficient – uses too much of input 2 and too little of input 1 with respect to the input price ratio W_1/W_2. Such a distortion disappear in correspondence to the input price ratio W^*_1/W^*_2, wherein prices W^*_1 and W^*_2 are the so-called *shadow prices* (i.e. the input prices that make an allocative inefficient firm efficient). The allocatively inefficient input combination corresponding to unit E is due to a perceived (and not directly observed) shadow price ratio which is different from the market (and observed) price ratio, thus leading to over-utilization of input 2 and under-utilization of input 1[6]. Therefore, the discrepancy between market and shadow price ratios (graphically represented by the different slopes of the two dotted isocost lines tangent to BB' at the points F and E) may be regarded as a proper measure of allocative distortion. In order to eliminate this form of inefficiency, firm E should be given well-designed incentives to change its input mix given the input market prices it faces.

On the other hand, scholars within the "structural and technological gap" view – see, for instance, Costabile (1996) – emphasize the role played by the structural poverty of the Mezzogiorno economy in terms of less favourable environmental conditions. In other words, the main source of regional differentials in performance is technical inefficiency. Turning to figure 1, point D is allocatively but not technically efficient. The main problem affecting unit D's performance lies in an excessive use of both inputs. In this view, development policies should put more emphasis on the improvement of the environmental conditions, the latter being the fundamental pre-requisite for (technical as well as human) capital accumulation in less developed areas. Hence, an "external" intervention is mostly needed in the form of public investments in both material and immaterial public capital. Improving communications and transportation infrastructures, enhancing law enforcement, enforcing public order, establishing high-quality educational institutions just represent a few possible interventions able to create the conditions to make more productive private investments in less developed areas.

---

[6] It is worth noting that such failure to efficiently allocate inputs are not necessarily due to a mistake, but rather to environmental factors that may affect producers' behaviour.