LEVELS OF ANALYZING PRODUCTIVITY. THEORETICAL SETTINGS

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Abstract:
Paper aims at setting rigorous differences between several main forms of conceiving and describing productivity, with comparative explanations and debate with respect to the practice impact of using them in practice.
Conceived as a purely theoretical setting, but in a heterodox approach, present paper debates several most recent literature views on productivity, related to actual requirements and having deep connections with the new long crisis.
The defining debate brings clarifying conceptual results, which are useful in the economic science, in conceiving and better understanding economic evolutions and long term revealed phenomenon. Several formulas can also be considered as important research result.

Key words: *productivity, service economy, qualitative growth*

JEL classification: D29, O49

1. No Value Economy? Levels and horizons of economic analysis

Beginning with the Neoliberal approach on the economy (that what Marx called as vulgarizing the economic science), the approach became the next: "Why theoretical complications? Let's see the practical evidences!" In other words, it is: "Why analyzing? Let's take into account only the most visible immediate facts. And let's take it just like that, without thinking about it.", *i.e.* without any value judgement or reasoning (in the same way as, by evidences, we could consider the sun as rolling round the earth[127]). This extremely practical approach is, of course, a simplistic approach, which refuses searching for the profound causes of a topic, giving advantage to the most superficial side of reality, in the name of "evidence", but suddenly even ignoring the logic that could rise by scientific study. In other words, if the study is too complicate to be made, the simple surface of things are accepted as the core meaning, as revealing the truth.

This is the approach by which *value* was no more judged and analyzed as a profound economic term, but was reduced to the forms under it appeared on the market: the *price*. Such an approach means that the causes are rather ignored, in the benefit of the immediate effects; as like the Romanian proverb says: *thief not caught still merchant hot* (if the causes are ignored, the reality can be ignored, getting another face). A very good definition of the indicators concerning the topic of value creation (*i.e.* productivity, efficiency, performance etc.) can be found in Djellal and Gallouj (2008 and 2012). They do it by showing the content of such indicators and the distinction between them results, as well as results a well set inclusion of an indicator into another.

Thus, the well set distinctions between (and definitions of) *productivity* and *performance* can be seen and better understood. We underline that *profitability* is only a transformed form of *productivity* (as we approached it in all our analysed and debates,

[127] We can make here the connection with „Tibiscus" University's motto (***Science tells you the truth. Do not be deceived by facts****!...*).

during the last two decades[128]); the quoted authors speak about *productivity* and *profitability ratio*, as the two main forms of *efficiency*: the *technical* and, respectively, the *financial* (side) efficiency.

The resulting ***levels of analyzing*** such indicators are[129]:

- the *meso* and *macroeconomic* level – where the major aggregates GNP and GDP are concerned by report to the inputs; a problem can be revealed in measuring value added (mainly in some market services and in most of non-market services[130]);

- the *microeconomic* level – the level of a firm or government;

- *inside the organization*: individual units within it ("establishment, department, workshop or functional service)"[131]; intermediate products are here put under attention;

- *individuals* and *small groups*.

We quote that at the forth level, Djellal&Gallouj are observing, within other difficulties of analysis, that "individuals are never isolated: they belong to groups and are always embedded in social structures characterized by cooperation and solidarity, which blur individual measurements." We underline such judgements as being valuable *for every individualistic approach*, for *all* the cases when the routine analysis refers to any kind of economic entity, *at all possible levels*. This is one of the core elements of *servicity* that makes the difference against *productivity* and brings a side of the plus of horizon this larger indicator allows.[132]

To such levels of analysing productivity, we added[133] the main possible ***horizons of analysis***:

- the *short and medium run term*; unfortunately, it is the common (routine) horizon of analysis, even if such routine level is very limited and gives the time-side of the market's myopia; the other dimension of this narrowness of approach is the space one: the "local" or rather "individualistic" approach, rather than a more comprehensive one (societal or planetary);

- the *long run term*; such approach is usually concerned in investment projects, for instance, in the efforts of companies for gaining or keeping large areas of market and such like concerns; it has a management or marketing stake;

- the *very long time*: it is the most comprehensive, often revealing what the evoked myopia is usually ignoring, with extremely bad effects for the humanity and the planet.

2. Comparative defining productivity indicators

Already Mihail Manoilescu (Manoilescu M., 2012) thought an economic enterprise advantageous judging not by the highest profit brought to owner, but by the income such business can distribute to as many as possible economic agents, such as creditors, employees, the State. Expanding the idea, by also considering Mother Nature as part of the enterpriser's environment, we could figure human activity (*in spe* economic) as a process producing plus utility by valorising resources existing in a state which can be turned to good account.

Servicity is a much more comprehensive indicator than *productivity* (Jivan, 1993)[134]. Servicity covers productivity (the only producer's viewpoint), also expressing

[128] See, for instance, Jivan 1993, 1996 and 2012.
[129] The quoted authors are specking about productivity; but if we take into account the former observation we made, it means the same conceptual indicator of efficiency (of productivity, in our language).
[130] The source: Djellal and Gallouj (2008), where this topic is developed mainly at pp. 6 and 7.
[131] Quotation from the same source, wherefrom we present those levels (*ibidem*).
[132] See *infra* our comparative developments.
[133] Jivan, 2011a.

the *other aspects of utility besides profit;* servicity therefore means performance and widened efficacy. In the set below, a comparison between productivity and servicity is presented, for a better understanding of this concept. The comparative ideas put together come from our numerous concept descriptions (especially in Jivan, 1996*,* as well as in many others elaborating on such concepts).

We will compare (*i*) productivity (*w*) or efficiency[135], with (*ii*) performance (P^{F}[136]) and (*iii*) servicity (σ). The main comparative issues are the next[137]:

A. *The conceptual scope of indicators:*

- ***productivity*** (efficiency): The common (usually computed) *productivity* describes the efficiency of the economic activity recorded by the economic entity *for itself*.

- ***performance*** (by Djeallal&Gallouj): Performance „encompasses (or may encompass) a multiplicity of objectives, not just economic goals, but social, ethical and ecological ones as well. It also includes ... effectiveness and efficiency, which are sometimes also denoted by the terms 'external performance' and 'internal performance' respectively"[138]. Obviously, performance is a larger concept than effectiveness (productivity being a form of such effectiveness). We underline that performance concerns the achieving of the goals of an economic (or non-economic) entity, and it is recorded by such entity, with respect to its (own) goals.

- ***servicity***: *Servicity* takes into account *the whole* output (in the wide meaning of this indicator) or only the efficiency for the *environment of the analyzed economic entity* (in the limited meaning of servicity). By including quantifiable and un-quantifiable (qualitative) external effects, servicity is larger than the indicator of performance too.

B. *The validity of indicators, in practice:*

- ***productivity*** (efficiency): Accurate for self-stimulation at the individual level and for *taking* maximal gains taking values *from* the environment.

- ***performance*** (by Djeallal&Gallouj): Allows a much larger approach of the role of an economic (or non-economic) entity and a bigger (stronger) responsibility. Therefore, the self-stimulation is much more eco- (or socio) responsible (may be even protective, is such adequate goals are set).

- ***servicity***: Self stimulation is done in a widened (also qualitative and responsible) horizon, involving also multidimensional responsibility: responsibility is social, human, related to Mother Nature, to the environment seen in space and in time concerning the societal and natural environment, concerning also the inter-generational relation. Therefore it is adequate for *giving* values (contribution by genuine merits for global utility).

C. *Several assessing attempts (indicators):*

- ***productivity*** (efficiency): The common (usually computed) *productivity* indicators couch the efficiency of the economic activity expressed in output (measured by incomes) related to the input (of L or K) factors.

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[134] This part of the paper we presented and discussed in RESER 2012 International Conference (Jivan, 2012), in an adequate form. The indicator was firstly suggested in 1993 at *The 9th Seminar on the Service Economy* in Geneva; the concept was agreed as adequate by Services World Forum and published in SWF Bulletin (Jivan, 1993).

[135] Djellal&Gallouj call it technical efficiency. It is another form of profitableness ratio, as we already developed by identifying those two indicators as being conceptually identical (the form of quantification is the only formal and differences).

[136] For it we will use the delimiting variant proposed by Faridah Djeallal and Faiz Gallouj in their very rigorous, commendable and useful effort of setting productivity indicators.

[137] The comparative presentation is a development of our paper presentation in RESER Conferences (2012, ASE Bucharest, but also 2011, when, unfortunately, a colleague sent a mistaken variant of our paper, and not the form I sent her and agreed to make it public) and comes mainly from our (Jivan, 1996) and from other papers where in we explained and developed the issue of servicity.

[138] Djellal&Gallouj, 2008, p. 4.

- ***performance*** (by Djeallal&Gallouj): involves an ecological-social (and larger) efficiency (expressed in output related to inputs).

- ***servicity***: Servicity is, in principium, output measured by the service realized by the concerned economic entity (*i.e.* the service induced to the beneficiary of it), related to the service received by the concerned economic entity, *i.e.* services it benefitted of in the purpose of realising its own economic activities.[139]

D. *A conclusive (and as well, defining too) definition of indicators:*

- ***productivity*** (efficiency): Expresses the utility brought (strictly) to the enterprising economic entity. Any expected results are assumed as "produced" by it and just "rewarded" belonging to it, and the effects on the environment (externalities) are not targeted by productivity: they are all assumed as being as well as the effects for the enterprising economic entity, thanks to the automat market mechanisms (exchange on the market and thanks to the "invisible hand").

- ***performance*** (by Djeallal&Gallouj): "denotes the ability of an organization (or of any other analytical unit) to achieve a certain number of general, pre-defined objectives relating to various aspects of its development." [140]

- ***servicity***: Expresses the utility brought to the beneficiary of the activity, to other economic entities, to the human society as a whole, to Mother Nature, the performer being integrated in an existing utility environment. Therefore, the economic entity is acting as a role accomplisher (a role for itself, but also – and mainly – for its environment, in the space and in the time dimensions). Thus, from the view-point of the service done, the global value, quantitative and qualitative is concerned.

In a review, it can be said that *productivity* (efficiency or internal performance) *is included in performance*, *which is included in servicity*.

All the indicators we quoted from Djellal and Gallouj are measuring indicators, concerning forms of measuring. Servicity is a principle indicator, an approach concerning the quality of creating value, an approach with reference to the economy as a whole. But even in this last case several formulas can be set (see *infra* next chapter).

3. Short intuitive describing formulas

If an economic agent pockets relatively higher returns, at lower costs, than others, then his productivity is said to be higher that his competition's. Such high income he can get at, by *e.g.* successful marketing campaigns, or by his promotion attractive to buyers beyond the intrinsic value of his supply, in the meaning that if the same merchandize had been sold by someone else, under a different brand, that latter vendor would have cashed in less. Analogically, an economic agent counting on his power on the market – implicitly negotiation power, up to oligopson stance – is likely to get lower input costs and good looking home registers. His incomes are his *production in money terms* witch, in a ratio to the costs of this input, yield a computed productivity higher than his competitors'.

An economic entity can thrive on its supplementary capacity of absorbing plus-cashing (if compared to partners and competitors), and, respectively of imposing minus-pay (as used to compute the value of its production). In other words, the entity gets rich as it deprives its competition (it steals customers away from), its clients (by pricing advantageous for itself), and suppliers (by prices in its own advantage).

By market negotiation, the offering economic agent effects a *private redistribution from other entities in its environment*, in his own behalf; we underline that it is a *private* redistribution – uncommon topic (not unusual for analysing in

[139] Please see *infra* several formulas proposed firstly in Jivan, 1996.
[140] Djellal&Gallouj, 2008, p. 4.

orthodox economics, which conceives the redistribution as being appropriate for being made exclusively by the state[141]). Usually, the *private redistributors* (and the Neoliberal economic approach as well) are rebelling against the redistribution made by the State, even if (or exactly because) the state were trying to correct such redistributions (made by private market power differences and attitudes action) by reverse redistribution (made by regulations), *i.e.* by *giving back* (at least in principle, as actually very accurate and complete rebalancing would be practically impossible) what was appropriated, at least to part of the party frustrated, wherever the State operates such redistribution.

Such is the reason why no true free exchange subsides: interventionism is what all who can will do, if strong enough to afford it, whether States or multinationals; a complete free exchange will happen only when the case is of powerful parties needing to solve, *by such exchange*, unwanted troubles or situations, *at the stake of others* if possible: for if the exchange pushes together the strong and the weak, then such exchange

The biggest productions are generating saturation effects (like in the case of public goods), which have external effects character. Such extremely big production levels are not "normal"[142], and growing quantities affects quality. Thus special rarity effects result, which are generating luxury economy (another side of the "artificial economy" we are living in). Servicity is emphasising such aspects of the economic reality, aspects that are ignored by the orthodox dominant economics. Such an approach comes also from the distinction Jean Gadrey made between "immediate" and "mediated" effects. Output is, itself, immediate or mediated too.

We can figure the plus obtained by the beneficiary, related to the effort of the performer[143]:

(1) $$\sigma = \frac{\Delta S}{S_p},$$

σ is servicity, here in the most narrow meaning;

ΔS - the plus of service;

S_p - performed services (effort);

The received services are.

The received plus (or service) S_r comes to the economic entity as a difference between the service that this entity is benefitting (from other entities) (S_b) and its own performance (service done, efforts made S_p). Thus:

(2) $$\pi = S_b - S_p .$$

In this case it can be netter seen that that what the economic entity gets (S_b) is taken (by its economic activity) from its environment (nature, suppliers etc.), and that it performs, its contribution S_p is that what it gives (by that activity) to this environment (clients, society, nature...).

It results clearly that the enterpriser profit is the plus of benefitting over his efforts (if the formula (2) is represented as a ratio, we get the formula of productivity):

(3) $$W = \frac{S_b}{S_p},$$

where: W is the (seeming) productivity of actor A;

S_b - the total service recorded to (by) actor A (his incomes);

[141] As well as the development topic is conceived as being appropriate only for the underdeveloped countries; as like the most developed countries stopped to develop themselves...

[142] See our paper Jivan, 2011b and 2008.

[143] This part of the paper is built starting from our comments and developments in (Jivan 1996).

S_p - the total service that is performed by actor A (his expenses).

In formulas (2) and (3) the legitimate tendency of every economic actor is obviously growing his receiving (incomes) and diminishing his expenses or efforts, i.e. that what is received (will be get) by others (from him), which is gift by him (what he creates). Such a principle is generally valid. The economic entity is concerned exclusively for itself and not by others or by its environment (be it individuals, society, or planet).

Normally, the fight of competition should bring a balance, but the pure and perfect competition does not actually exist (being a purely theoretical model). In plus, protecting the other parts (economic entities) than the very present ones is not possible, even in a such theoretical model: i.e. the next generations (which must pay – as they do already today, and suffer, because of the benefits their ancestors ever got), and Mother Nature, which is always suffering because of humans' activities, but cannot have a decision (quite like the next generations: a participation just for costs and sufferings, and not in the choices).

I believe that the human values are superior (and must not be reduced to such a simplistic logic). The economic science must not be interested anymore in every individual's benefit (assuming that such a benefit will bring the general good for all), but rather directly in everyone's contribution (to the environment, the nature and the next generations here included). The solution is given by the svc approach (from exactly the angle opposed to the common angle of approaching economic activities): the switch from the angle of (individual) benefits (productivity), to the angle of (individual) contribution (servicity) .

The formula could be the next:

(4) $$\sigma = \frac{S_i}{S_b},$$

where: σ represents the servicity of actor A for his beneficiaries (assessing his contribution).

S_i - services that are induced by the analyzed actor A to his beneficiaries;

S_b - services that were performed by other than actors A, for him (services that actor A benefitted by, in realizing his own activity, in realizing the effects S_i).

Results that servicity is bigger when actor A induces, to his beneficiaries, bigger services, by using less better conditions for himself (by taking the least from his environment).

S_i are, in fact, the services that are performed by actor A (and paid by his beneficiaries) and the profit that is induced to him (π):

(5) $$S_i = S_p + \pi_B$$

Thus, the formula (4) can be written as follows:

(6) $$\sigma = \frac{S_p + \pi_B}{S_b},$$

or, if replacing $S_p = S_b - \pi_A$ – by the formula (2) – in (6), results:

(7) $$\sigma = \frac{S_b - \pi_A + \pi_B}{S_b} = 1 + \frac{\pi_B - \pi_A}{S_b},$$

where π_A is the profit of actor A, π_B is the profit of his beneficiary (actor B).

Servicity is bigger when the benefit induced to his environment is bigger and his own profit is least.

5. Conclusive remarks

Servicity concerns the diverse *advantages and costs* that could be registered or calculated, for the different actors and factors in the economic life, taken in an apart way, including Mother Nature, by the criterion of the role of diverse factors involved or bringing opportunity, in generating value (in generating utility for mankind, not only market value). In that what concerns production, the Mother Nature is taken into account in other terms that in the owner-ship ones, but including ecological terms.

The fact that competition procedures are tolerated (by competitors) on the market and that also the imposed prices (imposed by the analyzed economic entity) are *accepted* (by its suppliers and customers) does not mean that they actually are *advantageous for suppliers and customers too*: they result from negotiation, thus often they can rather be the result of imposing the interest of the most powerful, of some black-mail or cunning behaviour (as, for instance, the effects of a nice and well-set – but possibly deceptive – label can have; the theory of the buyer's gain can also be invoked herein).

In our illustration the *mutual interest* presumed by the dominant economics is, to say the least, *idealistic*. Reality is rather tough (as Thorsten Veblen described the actual market fight is[144]). It would be a good thing if economic agents could thrive by *own value and personal contribution* (”give”), *i.e.* their capacity to do good (generally speaking: *i.e.* not only to them, but to others too), rather than to “take” from them and from other components of their environment. More realistically put, an enterprise should have limits set to how much it can gain by taking from others or from impoverishing others, so other economic agents can survive by its side[145], saving thus the idea of fair competition and the necessary benefits there attached. The *equitable trade* in current use defines precisely such point made, aiming at promoting the lesser economic agents on the market and protecting them from diminishing their market share or losing it to the biggest and financially and negotiating strongest. The clients then will decide for themselves who to bet their money on, *i.e.* who they choose to buy from and support for fairer chances against the competition.

Performance (in terms of not only profit but other competitiveness indicators as well) should increase, as benefit for the environment as well and not as the only advantage for the enterprising economic entity. Competitiveness and performance are core market indicators, in the business and economics routine approach. In our servicity view, we require such common criterions to be thoroughly considered in terms of client protection and satisfaction and, moreover, in terms of all partners' protection and serving (or satisfaction), as well as in terms of the entire environment protection and improvement, be this environment economic, societal and natural, at the whole planet level, in the temporal (intergenerational) dimension too.

We attach particular importance to such idea, because much too often traditionalist economic thought is partial to the enterpriser by approaching the economic reality from such angle of the enterpriser, by pursuing the interests thereof, rather than concerning for the *aggregate result* of the enterpriser's activity: in too many economic analyses the interest focuses on the *enterpriser’s results that are beneficial to himself*, everything else being left at the mercy of the *market*, seen as the angular stone (universal panacea). The market can boast mechanism (in action under any circumstances) which neither guarantee the certitude of entirely good effects at societal level, nor are infallible. Therefore economics should not overlook the *assembly aspects*:

[144] See, for instance, Veblen, 1953.
[145] A well set competition legislation must work.

for the clients, for the suppliers, for the State, for human society, for the natural environment, for the planet, for the future. A new economic growth approach (model) results in a synergic conception, as we firstly mentioned in Jivan (1996). Its approach is different by comparison to the traditionalist economic thought, being based on the new conception of servicity and of placing the intellect in the core of value generation and development.

It can be noticed that such a research would never be financed by several financing entities: because they have no interest in detailing the causes of enriching (or their enriching included), mainly in the causes others than by trade and negotiation power. They cannot be interested in revealing the immoral sides of economic activity, in modelling the bad effects on long and very long run term and such like deepening of economic research.

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