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Katherine Moos^{*} - K. Vela Velupillai^{**}

STABILISATION POLICY – PHILLIPS BEFORE THE ‘PHILLIPS
CURVE’¹

“Phillips wrote down the relation that subsequently became famous as the ‘Phillips curve’ and built it into his early models in order to remove [the classical dichotomy]. ... Although Phillips regarded the shedding of the dichotomy as crucial to the development of useful models of stabilization policy, he did not think it important to go further than just to write down a relation that captured what to him seems so obvious. *It is perhaps ironic that the world-wide fame of his name as well as his enormous influence over a decade of economic research stems to a great extent from what he regarded as both minor and an obvious (although critical) part of his system.*

The now famous curve made its debut in 1954 in Phillips’ first major published paper, ‘Stabilization² Policy in a Closed Economy’.”

Lipsey (1978), p. 49; italics added.

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¹ This is a contribution to commemorate the *birth centennial* of A. W. H. Phillips and the 60th anniversary of the first of two pioneering contributions by him (Phillips, 1954b), to a dynamic analysis of what was then referred to as *Stabilisation Policy*, within a *Keynesian (Closed, Linear) Multiplier-Accelerator* framework. A more integrated and relatively complete analysis, taking into account both the 1954 classic and the subsequent Phillips (1957) extension, is the subject of a paper under preparation by the authors, set within the broader context of the contemporary – i.e., early 1950s – literature on the *Theory of Economic Policy* (stemming, mostly, from the Scandinavian and Dutch discussion of the issues in the interface between theory and policy).

² The spelling in Phillips (1954b) is in terms of ‘British’ English, i.e., *Stabilisation*, rather than ‘stabilization’; we have followed the Phillips practice in this paper.

Abstract

The remarkable two contributions to what we call the *classical* theory of stabilization policy, within the framework of a Multiplier-Accelerator model of Keynesian Macrodynamics were those of Phillips (1954b, 1957). In this brief 60th anniversary *homage* to the former of the two pioneering contributions, we outline three possible extensions, entirely in the tradition broached by Phillips in his two classics. The underlying theme is to revive the tradition of structured simulations to explore alternative policy regimes, in a traditional framework of nonlinear macrodynamics of coupled economies.

JEL CLASSIFICATION: B41; C02; E12; E63.

KEYWORDS: STABILISATION POLICY; NONLINEAR MACRODYNAMICS; STRUCTURED SIMULATIONS; COUPLED ECONOMIES.

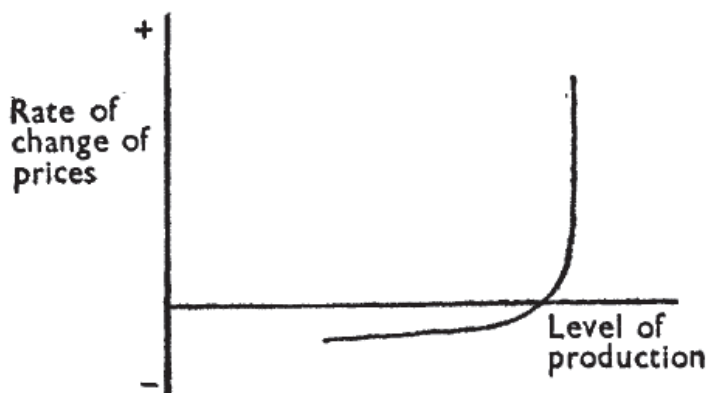
1. The Setting

“In [Phillips (1954b)], a remarkable essay that emerged from his dissertation, Bill Phillips demonstrated that automatic *stabilization policies* can exacerbate instability rather than contain it. The essay also offers an intuitive description of one process that can be taken to underlie the *Phillips Curve*. In addition *such a graph is drawn in the paper*, though *it is based neither on empirical data nor on any formal model.*”

Baumol, 2000, p. 282; italics added.

The ‘graph’ Baumol refers to, which ‘is based neither on empirical data nor on any formal model’ appears as fig. 11 (p. 308 – reproduced here as Fig. 1, for convenience – in Phillips, 1954b);

Figure 1



It is to this that Lipsey (op.cit) refers as the *now famous [Phillips] curve [which] made its debut in 1954 in ...*, ‘*Stabilization Policy in a Closed Economy*’. It is at least of doctrine historical interest to recall the guarded way Phillips qualified the form of the graph:

“We may therefore postulate a relationship between *the level of production* and the *rate of change of factor prices*, which is probably of the form shown in [Fig 1], the fairly sharp bend in the curve where

it passes through zero rate of change of prices being the result of the greater rigidity of factor prices in the downward direction. ... In spite of the marked curvature of the relationship, linearity may be assumed as approximation for small changes in production.”³

The relationship that was made ‘famous’ in Phillips (1958) was, of course, between unemployment rates and the rate of change of money wages – but the idea of the form of the ‘graph’ remained, albeit in a mirror reflected form.

The bare fact of the provenance of the classic of 1954 is stated in the opening sentence of the lead footnote in the paper (footnote 1, p.290):

“This article is based on part of the material of a thesis submitted to the University of London for the degree of Ph.D.”

The Ph.D. thesis was titled *Dynamic Models in Economics*⁴, examined by Sir John Hicks on 10 December, 1953, with the degree itself awarded on 27 January, 1954 – which makes this 60th anniversary *homage* doubly apposite.

Unlike Lipsey⁵, however, our conjecture is that the curved form of the graph had to be postulated by a Phillips who was *simulating* a system of differential equations by an *analogue computing device* of his own

³ Perceptive and knowledgeable readers will recall Fig.1 in Goodwin (1967, p. 55) and *his* assumption of linearity of the relationship between the proportional rate of change of real wages and the unemployment ratio. This kind of postulate goes back not just to Irving Fisher, as many have observed, but all the way to Marx – and even Ricardo!

⁴ It is interesting to remember that Phillips (1950) was titled: *Mechanical Models in Economic Dynamics*. Surely the addition of the word Mechanical to this title reflected the fact that the article was devoted, almost exclusively to a descriptive and engineering explanation of the design and structure of the *Phillips Machine*, but resting on the *dynamic* economic foundation of Keynesian macroeconomics built on multiplier-accelerator bases. This is most evident in Phillips (1950, p.289, footnote 4)), where the reliance on Goodwin (1948) is made clear, but the first reference to the ‘Hicks-Goodwin theory of limit cycles in a non-linear system’ is in his review (Phillips, 1954a, p. 364), of Kalecki (1954), in the same year as the classic of 1954 – which makes this a *triple* 60th anniversary *homage*! Goodwin’s (1956) caustic review of this (mostly unrevised) collection of previously published essays by Kalecki is written in the typical maestro’s style of ‘*Let’s carve him as a dish fit for the gods, Not hew him as a carcass fit for hounds*’ (*pace*, Caesar, Act 2, Sc. 1).

⁵ Not that we disagree with Lipsey’s explanation in terms of the attempt by Phillips to remove the sharpness of the classical dichotomy; it is just that the *engineer* in Phillips, with the *analogue Machine* he constructed, at his disposal, could not possibly make the hydraulic and mechanical system function without ‘breaking’ the ‘dichotomy’ and making it a ‘smooth curve’.

construction – the *Phillips Machine*. Phillips' simulations in Phillips (1954b, 1957) were not those of an approximation or a discretization of the system of theoretical differential equations he had set up. They were exact simulations of a system evolving according to linear differential equations (not linear difference- differential equations, nor linearized nonlinear differential equations).

To the best of our knowledge, no one⁶ has emphasized this particular point: that all the *simulations* reported in Phillips (1954b, 1957) are those of *exact solutions*, implemented not on a digital computer, but (presumably) on an *analogue* device, most likely the *Phillips Machine*⁷.

The macroeconomic underpinnings of the models in Phillips (op.cit) are of the traditional multiplier-accelerator form, for one closed macroeconomy, albeit in their linear variants (although the inspirations are obtained from the nonlinear Goodwin models of 1948-1951; this is particularly evident in Phillips (1950)).

This brief homage to the 60th anniversary of Phillips' pioneering contribution to stabilisation policy is, therefore, structured as follows. In the next section we outline the underpinnings of the basic framework, mathematical and economic, in Phillips (1954b). In § 3, we attempt to suggest three extensions – nonlinearity, coupled macroeconomies and the resulting inevitable study of coupled nonlinear systems by simulations (simply because closed, computably analytic solutions of such systems are provably (almost) impossible to derive.

2. A Discussion

“The structure of macro-economic models is shown up very clearly in terms of schematic or **block diagrams**, developed by engineers and *first used for economic systems by Phillips [1954]*⁸.”

⁶ With the possible exception of Thalberg (1971a, 1971b); see the opening quote in § 3.

⁷ Interestingly, there is no particular reference to the *Phillips Machine* in Phillips (1954b) – perhaps because the wholly linear systems considered in this paper are all exactly solvable.

⁸ This is, strictly speaking, not correct. Goodwin used block diagrams most felicitously, already in 1951 (see, Goodwin (1951), p. 7).

Allen, 1967, p. 97; bold phrase in the original; italics added.

The bare bones of the underpinning economics of the model of *Stabilisation Policy in a Closed Economy*, is that of an expenditure-based, multiplier-accelerator dynamics, of a closed, aggregative, macroeconomy, of the then accepted framework of Keynesian economics. The later much misunderstood and narrow (very American) distinction between ‘Keynesian Economics’ and the ‘Economics of Keynes’ had not, as yet, crystallised – after all Samuelson’s acknowledged misnomer, the *neoclassical synthesis*, had only appeared in the 1953 edition of his popular Economics textbook (a phrase coined, according to Samuelson, ‘to get McCarthy off [his] back’). However, the multiplier-accelerator dynamics is, itself, *linear*.

Thus the mathematical formulations of the economic models are in terms of *linear, ordinary, differential equations* – at most of order four, but ranging from two to four, depending on the various combination of proportional, derivative and integral policies that are integrated into the underlying multiplier-accelerator models.

The *pure* – i.e., without the addition of proportional, derivative or integral policies, or any combinations of them⁹ – multiplier-accelerator model (equation 7e, p. 321) is a linear, second-order, ordinary differential equation; this model, with the sole addition of proportional stabilization policies becomes a linear, third-order, ordinary differential equation (equation 7f, p. 321); finally, the multiplier-accelerator model with either proportional plus integral stabilization policy regimes, or all three policy regimes together, becomes a fourth-order, ordinary differential equation (equations 7g, p. 321 or 7h, p. 322).

Determining the initial conditions for the higher order equations, in the context of Phillips’ fertile use of a background block-diagram structure for the various systems (see *op.cit.*, Fig. 12, p. 309), are in terms of simple rules for systematic and sequential integration, as set out in footnote 1 of pp. 319–320.

⁹ In which price and interest rate variations are abstracted from and, in any case, when changes in these crucial monetary variables are explicitly considered in Phillips (1954b), they are done so for the pure multiplier model, ‘excluding the acceleration relationship’ (*op.cit.*, p. 322).

The simplicity of these rules can be shown by considering the block diagram for a second-order linear differential equation, and the rules for systematic and sequential integration. Consider the *linear*, second order, differential equation that once formed the fountainhead of Keynesian, endogenous, macroeconomic theories of the cycle (the canonical equation in the Phillips differential equation model of the macroeconomy, 7e):

$$ad^2\mathbf{x}/dt^2 + b d\mathbf{x}/dt + k\mathbf{x} = F \quad (1)$$

where, of course, a, b, c and F are given parameters;

Solving for the second order term, $d^2\mathbf{x}/dt^2$:

$$d^2\mathbf{x}/dt^2 = (1/a)F - (k/a) d\mathbf{x}/dt - (b/a)\mathbf{x} \quad (2)$$

Integrating (2) gives the value for $d\mathbf{x}/dt$ to be replaced in the third term in the above equation and integrating \mathbf{x} , gives the value for \mathbf{x} , and the system is 'solved'.

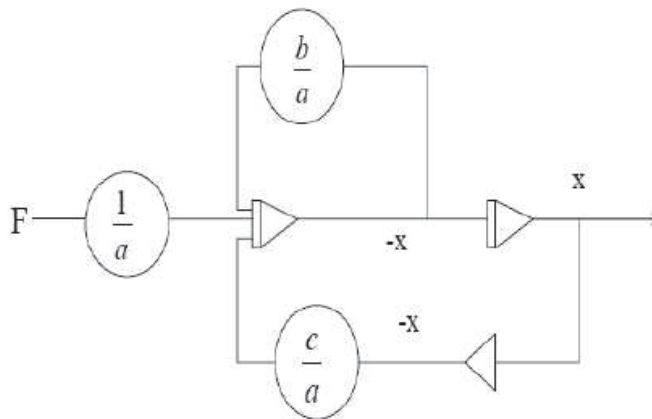
It should be remembered that these are exact integrations, given the linearity of the system, and closed form solutions are obtained for the given initial conditions.

Thus, three mechanical, electrical or even hydraulic elements have to be put together in the form of a block diagram, eventually to form an analogue computing machine such as the one Phillips constructed in 1949, to implement a solution for (2):

- An element that would add terms, denoted by a *circle*;
- An element that could multiply constants or variables by constants, denoted by an *equilateral triangle*;
- An element that could 'integrate', in the formal mathematical sense, without resorting to sums and limiting processes, denoted by a 'funnel-like' symbol;

Thus, three circles, one equilateral triangle and two 'funnels', connected as in Figure 2, can solve the above equation:

Figure 2. Block diagram for a second-order, ordinary, differential equation.



One final remark is necessary here. Although we have highlighted – and Thalberg (1971b) emphasised – the simulation aspect of the stabilization policy exercises carried out in Phillips (1954b), it is, surely, clear that exact, closed form, analytic solutions are feasible, given the initial conditions, for all of the differential equations considered by Phillips. In this sense it is not clear that any meaningful simulation is required, to learn about the characterization of the attractors of the dynamical systems and, thus, to determine the trajectories towards the determined equilibria.

The various policy regimes can, in fact, be considered ‘proxies’ for ‘external shocks’, in the terminology of currently fashionable orthodoxies, although, of course, these proportional, derivative and integral – and combinations thereof – alternatives are not ‘stochastically’ determined. They are part of an exploration of alternative dynamics and, in this sense are a rich and copiously imaginative exercise in structured simulations of a variety of feasible and desirable policy regimes.

In this sense the exercise in Phillips (1954b) is outside the formal theory of economic policy – either in its classic target-instrument approach, or in its

more modern, mindless, optimal control (or dynamic programming) determined policy nihilistic exercises.

We like to interpret it as the setting stage for the extensions that were mentioned, ‘here and there’, in the various Phillips contributions from 1949 to the eve of the (in)famous advent of the *Phillips Curve*. This irreversibly changed the course of policy oriented macroeconomics, first by emphasizing trade-off between inflation and unemployment, in the context of macroeconomic dynamics, then by the eternal new dichotomies between short and long term dynamics, adaptive and rational expectations and, finally, the ultimate in policy nihilism, variations of the *Lucas critique*, culminating in a poor imitation of the richness in Phillips (1954b) by the overwhelming emphasis on *Taylor rules*, for a narrow and jaundiced approach to monetary policy.

The rich and varied tradition of a theory of economic policy where there was no question of a trade-off between inflation and unemployment, because there was an underpinning in relevant institutional economics, was all but forgotten.

3. Equations An Extension – or *Three*

“In two well-known articles .. in *The Economic Journal* in 1954 and 1957, A. W. Phillips illustrated some general problems of stabilization policy with the help of a few simple dynamic models and simulation techniques. ... However, the adequacy of Phillips’ methods may be questioned. Phillips .. stressed the need for further studies. Following his specific suggestions, the author seeks to extend Phillips’ analysis by incorporating *non-linearities*, growth trend and multiple objectives in a simple way.”

Thalberg, 1972b, p. 385; second set of italics, added.

Three obvious extensions are in order:

1. A *nonlinear* multiplier-accelerator system of Keynesian macrodynamics;
2. A consideration of *open* macroeconomics;
3. A framework for *structured simulations*;

A consideration of the first two extensions together implies, in an endogenous macroeconomic framework, coupled dynamics. This almost necessarily involves a consideration of structured simulations simply because coupled nonlinear systems of differential equations are rarely amenable to closed form analytic solutions.

Phillips was well aware of the feasibility of the first two extensions within the broad framework given in Phillips (1950) and Phillips (1954b). For example in the former, he states very explicitly, (pp. 287-288; italics added)¹⁰:

“The hydraulic model will give solutions for *non-linear systems* as easily as for liner ones. It is not even necessary for the relationship to be in analytic form: *so long as the curves can be drawn*¹¹ the machine will record the correct solutions, within the limits of its accuracy. In giving the equivalent mathematical model, however, the usual linearity assumption will be made, in view of the difficulty of working with non-linear differential or difference equations.”

Similarly, in relation to the initially restrictive assumption of a closed macroeconomy, in Phillips (1954b), he pointed out, with characteristic perspicacity (*ibid*, p. 305, footnote 1; italics added):

“The general principles of stabilization have been illustrated here with particular reference to aggregate production in a *closed economy*, but they are of general applicability. They could equally well be used, for example, in investigating *the stability of adjustments in international trade*, or the problems involved in commodity price stabilization schemes.”

¹⁰ As Goodwin (1950, p. 319, footnote 6) picturesquely, if also soberly, noted: “*Combining the difficulties of difference equations with those of non-linear theory, we get an animal of a ferocious character and it is wise not to place too much confidence in our conclusions as to behavior.*”

¹¹ See McRobie (2010) and Goodwin (2000).

Thus, using the nonlinear multiplier-accelerator Keynesian model developed in Zambelli (2010), we get, for the aggregate dynamics of production, Y :

$$\varepsilon \vartheta \ddot{Y}(t) = -(\varepsilon + (1-c)\vartheta)\dot{Y}(t) - (1-c)Y(t) + C_0 + \varphi(vY(t) - K(t)) \quad (3)$$

The state space representation of which is given by the following three first-order, nonlinear, ordinary differential equations:

$$\dot{Y}(t) = Z(t) \quad (4)$$

$$\dot{Z}(t) = b [C_0 - (1-c)Y(t) - aZ(t) + \varphi(vY(t) - K(t))] \quad (5)$$

$$\dot{K}(t) = \varphi(vY(t) - K(t)) \quad (6)$$

$$b = \frac{1}{\varepsilon \theta}; \quad a = \varepsilon + \vartheta(1-c)$$

Where:

$K(t)$: aggregate capital at time t ;

ε : Robertsonian lag between the decision to consume and its realization;

$\square + \varepsilon$: Lundbergian lag between the time at which decisions are made to invest and its realization;

θ : half the construction time required for new equipment;

Relation (3) is the most direct extension of the linear multiplier-accelerator model in § 8 of the mathematical appendix in Phillips (1954b, p. 321).

The next step, of course, is to link two trading economies with each other and consider the complete system of six nonlinear ordinary differential equations, in state space and block diagram representations. One way of doing this is given in Zambelli (*op.cit*), but it is not the only way.

Finally, two caveats to the above discussion on extensions are apposite, here:

First of all, it is not necessary, as Phillips and Goodwin seemed to have thought, to connect two Phillips Machines – or two analogue computers – to study the dynamics of coupled economies. One system of six coupled,

nonlinear, ordinary differential equations, can be explored for possible attractors by means of a series of structured simulations, using *one* Phillips Machine.

Secondly, it is provably impossible to find closed form, analytical solutions to such a system of six coupled nonlinear ordinary differential equations: structured simulations are the only computational means at our disposal – for now.

4. Brief Concluding Notes

“So you can imagine my pleasure when I arrived in Cambridge to find the Phillips machine, which could *simulate arbitrary nonlinear dynamics*. I found it a difficult machine and had troubles but, with occasional help from Phillips, I managed to keep it functioning for some years. ...

[PS: I was very pleased that Phillips had 2 machines in London and I was able to show him (which he had doubted) that we could produce aperiodic, ‘chaotic’, motion¹² *with the two interconnected*.]”

Goodwin, 1991 [Letter to Nick Stern]

The decades of what we *call* *policy nihilism* span the thirty years from the *Lucas critique* (Lucas, 1977) to the eve of the *Great Contraction* – i.e., 1977 to 2007. The hallmark of these thirty years of monumentally *ahistorical* scholarship, particularly in macroeconomic theory and its policy bases, was, surely, a comprehensive ignorance of the pioneering works by the Phillips contributions prior to the ‘sanctification’, in vulgar neoclassical economics, of the *Phillips Curve*¹³ contribution in Phillips (1958).

The whole sorry tale of the *Taylor Rule* (Taylor, 1993), and its dominance in monetary policy discussions, is a further testimony to the errors of using

¹² It is just as well that the *maestro*, Richard Goodwin, places chaotic within quotes – since what he generated was what is now called the *quasi-periodic paradox*!

¹³ Lipsey (1978) suggests (*ibid*, p. 51) that the phrase was coined by Paul Samuelson in the sixth edition of his celebrated undergraduate text, *Economics*. Thus, we have been saddled with two regrettable phrases by the last of the Universal Economists – one in the 3rd edition, *the neoclassical synthesis*, and the other in the 6th edition, *the Phillips Curve*!

intrinsically non-dynamic frameworks – i.e., non-endogenous dynamics – to discuss the pseudo dichotomy between rules and discretion.

It is, at least for us, an astonishing historical fact that Phillips, already in his pioneering classic of sixty years ago, was naturally considering the issue of *good*¹⁴ (cf. Taylor, *op.cit.*, p. 195), not *optimal*, policy rules. For, after all, how does one compute – or even show the existence of – an optimal policy rule in a nonlinear dynamical system, constrained by multiple objectives?

The point we wish to make is quite simple: Phillips (1954b), together with the analogue device he constructed, and described in Phillips (1950), are the most fertile spring boards for a revival of a development of an applicable theory of economic policy. In them one finds the seeds of a re-orientation of an approach to simulational explorations to learn from structured experiments – just as he did with his wise and enlightened study of alternative policy regimes, within an explicitly developed endogenous macrodynamic model.

That the model has been discarded is an indictment of the professions mono-maniacal devotion to *ad hoc shockeries*¹⁵. That the method of simulation was superseded by trivial and inappropriate econometrics is a further testimony to the methodological madness of the profession, at one of the frontiers of policy nihilism.

Above all, Phillips always knew the wisdom of remembering that a *continuous* time dynamic model requires an analogue computing device to make sense of structured simulations.

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¹⁴ In the true sense of Voltaire: *Le mieux est l'ennemi du bien*.

¹⁵ Richard Day's felicitous term to describe Lucasian Macroeconomics (Day, 1992, p. 180)!

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WHO HOLDS THE KEYS TO DEVELOPMENT? FROM ECONOMIC
CATCH-UP TO *HUMAN DEVELOPMENTAL STATE*

Abstract

This article highlights the concept of human rights within the general model of the Developmental State (DS) approached from a political and economic perspective. The study reveals the conceptual inadequacy of the old model of DS in developing and enhancing the implementation of human rights and, in particular, emphasizes those rights commonly falling in the category of human rights unconnected to merit goods and associated with the integral approach to human development. In this sense, the research findings of this study are both in contrast with the destruction of institutional capacity to pursue developmental goals under the contradictory view of mainstream economics and inconsistent with the adverse criticism to human rights policies aimed at strengthening a transition to democracy and inducing structural rearrangements within the old model of DS. For this reason, we address some key issues confirming the economic and political feasibility of such human rights policies since the integral achievement of human rights moves the new model of DS significantly in the direction of dealing with regional and global dimensions, in order to realize the passage from “*freedom of*” to “*freedom from*”. Furthermore, the new model of DS can lead underdeveloped countries to the economic and technological edge precisely

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because of the social and political results achievable. Therefore, the main aim of this article is to contribute to the epistemological and methodological analysis of developmental state and to investigate how an *integral human development* approach can not only distinguish the researcher's experience as meaningful within the context of development studies, but also how such an approach can be useful to engage with particular social and cultural facets, namely the insights of human rights in the socio-economic policy-making process. The latter remains an area of research which, despite the negligible results achieved by the mainstream Neoclassical view on policy-making in the developing world and the heterodox extensive research undertaken, still remains conceptually under-theorized. The more than sixty years since the Universal Declaration of Human Rights have provided sufficient opportunity to reflect on one of the key concepts which underpins and informs the human rights framework from the perspective of development.

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1. Introduction

The literature on growth and development economics has contributed to address and raise questions of contemporary differences across countries focusing on the issue of socio-economic catching-up and speculating the extent to which differences in the growth rates of developed and developing countries were such as to lead to a global convergence of economic growth (among many others, see Gerschenkron 1960, 1962; Kristensen 1974; Abramovitz 1986, 1986; Baumol 1986; Lucas 1988; Verspagen 1991). However, catching-up theories have had only partial evidence in terms of regional relative convergence and in any case have been limited to specific homogeneous groups of countries or particular context such as the so-called middle-income status. Indeed, while there is agreement on the relevance of the argument for some countries and/or regions, there is also accord with an understanding that catching-up is not a global phenomenon. Most studies only took into account the industrialized countries (usually OECD

countries), and did not look at convergence between advanced market economies, developing nations, and socialist economic systems or socialist ones in transition. The issue of convergence has been also partly overcome by the new growth theory, or endogenous growth theory, and by the endogenous regional development approaches which aim to internalize the growth and development factors such as technological change and human capital. Nevertheless, the issue of economic catching-up is still an essential part of the economic policy debate. In this regard, some Asian countries with a rapid industrialization has involved the issue of catching-up in their socio-economic development strategies. According to the theory of convergence, catching-up is a dynamic phenomenon toward which would gradually tend the entire economic system. There again, in this work catching-up represents a long-term development goal actively pursued by the government and not merely an automatism of the general economic system. This involves all elements of the public economy: economic policy, human and civil rights, social policy, the idea and organization of the state, international trade, and the rest. In this context, economic theory represents a major premise as the models it generates are of fundamental importance for the strategic design of economic and political structures, and economic policies that follow. For that reason, starting from Tinbergen-Theil's traditional *theory on policy neutrality problems* (Tinbergen 1952, 1956; Theil 1964) and taking fully into account both of the limits of deductive logic and empirical applications of the *hypothesis of rational expectations* by Lucas (1976)¹, we introduce non-neutrality through the early assumption that economic theory affects economic policy and, therefore, the potential for systematic interventions of the public sphere in the economy. The aim of our study is to provide further insights for conceptualizing developmentalism, or the idea of developmental state, and to show how a perception of socio-economic development focused exclusively on the economic catching-up has conducted the model of Developmental State (henceforth also referred to as DS) both to enable partial forms of protection and incomplete promotion of certain human rights and to deny others. In spite of the novelty of the term *developmental state*

¹ Much has been written on the topic of the failure of the *hypothesis of rational expectations*. In this work we state only that rational expectations "have also turned out to be grossly inconsistent with actual behavior in real world markets, particularly in financial markets, leading economists to search for alternative, behaviorally based representations." (Frydman and Goldberg 2007, p. 54) and were revealed (if not exposed) by the extremely serious evidences of the global financial crisis of 2007-2008. On this issue, see also one of the later works by Frydman and Goldberg (2013).

itself (it came into general use in the Eighties in the last Century), we propose here a restatement of the neologism introduced by Carl Riskin (2007a) concerning the *human developmental state* in which, more generally, objectives usually pertinent to human development are added to those related with economic growth built on industrial mass production. Indeed, in Section 1 we underline the relationship between the concepts of human rights and freedom. In this way, we come to the definition of an integral approach to human development (integral human development approach). These relations will be involved in the second section for the conceptual analysis of the old model of DS in order to explain the partiality of the results achieved in terms of perception and representativeness within the policy-making process. The integral human development approach will be implemented in the third section for the purpose of applying it to the new model of DS. In particular, we consider how the model of new DS, embedded in a democratic system, can contribute to activate full potential forms of protection in the human rights framework as well as to discover critical aspects of the general DS model (old DS) in the current globalized context. Such a methodology may allow for a better understanding of the dynamics of state intervention across some countries from an heterodox perspective. The present study is particularly concerned to trace out the analytical compatibility of the theory of human rights with the DS model. To do this, we have to consider both the essential defining features required for the socio-economic development and the conceptual foundations of developmental states and developmentalist ideology, and explore whether there are any points of divergence between the processes of development and the DS toolkit of experiences. The study is here interpreted through the wider lens of human rights under which the concept of development is properly applied and also acquires social and human insights. Essentially, the theory of development cannot be based only on a high rate of economic growth and industrialization, as in the old DS, but becomes a wider concept based also on democratic and human rights issues. The motivation is concerned with civil rights, political and economic rights and their connections with the concepts of freedom, form of state and government (and in particular with that of democracy) and socio-economic development. These connections are mainly required for those essential defining features that will promote the idea of integral human development as well to provide both answers to specific research questions in reassessing state-led development and more accurate interpretations of the linkage-agency

analysis in interpreting state intervention and formulating socio-economic policies. Indeed, human rights are key elements and fundamental values to construct and implement any form of freedom, including socio-economic and structural processes. Certainly, freedom is the very basis of any analysis of development and involves constitutive and instrumental functions. In the approach of human development (Sen 1981, 1991, 2001, 2004) freedom represents at the same time the realization of the possibilities of human beings and the protection of their rights. Although a thorough analysis of human rights is not possible here, a very brief explanation is required: human rights are rights one has because one is a human being or rights that derive from the inherent dignity of the human person. The crucial ideas that need to be explicated at the level of conceptions are rights, persons, and human dignity. Early research on human rights were dominated by political and civil rights, as researchers attempted to examine how and why states violate such rights (Wolpin 1986; Stohl and Lopez 1987; Park 1987; Mitchell and McCormick 1988). The role of the state in protecting human rights and fundamental freedoms is twofold: to promote universal respect for and the observance of human rights and fundamental freedoms for all people and to take joint and separate action to achieve this goal determining direct interventions to foster them. This indicates that a merely partial implementation and/or enforcement of human rights by the state is not enough to ensure a full human development that underlines the need to a new approach about development issues. Human rights, in fact, must be guaranteed in their entirety for all human beings and, therefore, we intend to refer to and apply the “*human rights development approach*” to the analysis of DS. To be able to consciously do this and analyse all the aforementioned instances, we proceed from an historical empirical evidence: developmentalism has often invoked and implemented the suspension of civil and political rights (Mkandawire 2010). The advocates of authoritarian regimes of the East Asian Developmental State (EADS) have argued that suspension in the name of progress and development, to paraphrase Antonio Gramsci, a development with a “non-human face”. On the contrary, we show how the human development approach enables us to respond to the criticisms of the theory of human rights around its foundation, universality and preeminence. In Section 2, we discuss the extension of the definition of DS, starting from the idea of economic legitimacy and related functional aspects, until the idea of development goals, considering the way in which countries pursue such goals. We analyze the ambiguous relationship between

government objectives, social policy and human rights in the old DS. As a matter of fact, the EADS carried out increasing social investments but the rapid economic and social growth was often supported by authoritarian regimes and deficient levels of democracy. All this gives rise to what we have defined as “temporal paradox of DS”: an exchange of roles and objectives between economics and politics. The policies implemented by Developmental States focused on economic objectives of short-medium term. They overshadow the protection of human rights, especially those civil and political rights, which are part of the relation between state and citizens and are included in long-term goals. The paradox is resolved by considering the role played both by political legitimacy and international economic competition. The development vision as the pursuit of economic catching-up has led to a denial of certain rights and a partial protection of others. In this regard, we reflect on the role of the state in the perception of the first and second generation of human rights. The first generation is negatively perceived because of its limiting character of state policies. On the contrary, the second generation of human rights is protected in the developmentalist policy even if instrumentally, since human capital is considered a factor of production essential for the economic catch-up process. Finally, we address the issue of methodology and approach to human development as potentially resolving the paradox of DS and the concept of integral human development as potentially capable of overcoming the problems related to the perception and decision-making of governments. Section 3 discusses the model of Democratic DS (DDS). Democratic systems, actually, are the only rational forms of government capable of aggregating preferences aimed at achieving a goal as complex as human development. In accordance with the human development approach, the goal of the expansion of the capability set can be pursued by deliberative democratic systems. Therefore, we adopt the pattern of perception previously introduced to the new model of DS or DDS. Different levels of democracy may exist within the definition of DDS, which may affect the results of the analysis of perception. In an ideal DDS, the protection of the first generation of human rights is all one with the pursuit of human development. Moreover, this protection assume an enabler character for the same DDS. The second generation of human rights can be entirely considered as a part of the social policy for Democratic Developmental States. More precisely, the democratic environment allows efficiency mechanisms and co-production of civil and social services. We can outline a

DDS feasibility outlook taking into account the complementarities of human rights, the relationship with investments, the developmentalist regionalism and the relationship between economic growth and democracy. In Section 4, the study shows various results concerning the empirical observations which confirm the theoretical analysis and enable a possible formulation of tests in order to consider all the features of the concept of integral human development. In particular, we refer to the analysis on the relationships regarding government policy and economic growth rate. Finally, in Section 5, the main arguments and conclusions are summarized along with some implications for the economic theory. The economic literature about this subject can be divided into two main areas of research strictly separate: the area of sociological economics and that of economics. The first area refers to studies that are concerned with EADS starting from the works by Johnson (1982), White (1988) and Wade (1990). Specifically, the Developmental State became extensively used in various countries experiencing different processes of development and well-founded conceptualization as a result of Chalmers Johnson's seminal analysis (1982) of Japan post-war economic recovery (Beeson 2009). In its original formulation by Johnson the developmental State provided a number of functions - among which were proficient public agencies and specific industrial policies - that allowed it to play, for instance, a significant role in steering the course of Japanese economic resurrection: *"The key quality that made the State in Japan developmental was that it planned the development process rather than relied on market forces to determine the optimal allocation of resources. Unlike "market rational" states, which were concerned with simply establishing the rules of the economic game, the "plan rational" state sought to formulate and pursue substantive social and economic goals."* (Beeson 2009, p. 8). During the Eighties of the last Century, EADS faced with an unpredictable phenomenon at that time, synthesized by the expression "Asian miracle". Scholars such as Shapiro and Taylor (1990), Evans (1995), Chang (2002a) and Rodrik (1999, 2006), Persson and Tabellini (2003, 2006), Besley, Persson and Sturm (2005), Besley and Kudamatsu (2006), and Kohlscheen (2005) have found significant effects of political institutions on economic performances. Among others, Evans and Chang have empirically investigated the determinants of economic growth in Asia observing in particular certain economic and specific institutional characteristics. The unique economic nature of the so-called *Asian dragons* or *tigers* focused the studies on the model of DS in parallel to the discussion

of development economics of the Eighties-Nineties of the last Century. They have focused on the analysis of social and political elements of Asian development and the possible exportability of the model in non-Asian contexts (Mkandawire 2004; Edigheji 2005, 2010; Gumede 2009). The second area refers to the economic theory, since the work of Robert Solow (1956) that provides main theoretical foundations of economic catching-up. It should be noted as the series of predictions on convergence, deductible from Solow's model, were largely reduced both in time and space (De Long 1988). More specifically, the convergence is explained in terms of macro-regions constituted by countries with similar characteristics which well approximated the macroeconomic dynamics in EADS countries (Romer 1994). Included in this strand of literature are placed theories of endogenous growth (Lucas 1988; Barro 1990). However, these contributions do not fit to explain the so-called miracles of growth although they contribute to give details of the role played by human capital and knowledge in development processes. These theories have failed to identify the role of the stock of productive knowledge that explains why EADSs are a relatively recent phenomena in the history of socio-economic development (Parente 2001). Ultimately, among the theoretical contributions we have to point out the importance of the new economic thinking on the concept of development following the works of Amartya Sen on human development and the concept of capabilities (Sen 1987, 1999). It is precisely the connection created by the latter contributions that allows us both to combine the two areas of research above mentioned and, at the same time, to approach the study of the traditional model of DS also in terms of human rights, which is the ultimate purpose of the present work. It is a connection that has remained almost neglected by the first area of research, if not for particular categories of rights (O'Donnell 1979), which has only recently switched to a revision of the old model of DS, the so-called DDS. Similarly, the recent theory of capabilities has not yet been applied to the case of so-called emerging countries. In fact, the studies in this regard focused on the determinants and effects of economic performances, leaving in the background the disappointing "human results".

2. Human rights in the perspective of integral human development

The purpose of this section is to show the relationships between human rights, freedom and the political system, in order to outline the shortcomings

of the traditional model of the Developmental State (old DS) and the potential challenges for a possible re-proposal of it in the future. To do this, we use the concept of human development and we refer to a specific integrated approach proposed by Amartya Sen (1999a), also verifiable in the official United Nations and World Bank sources. The concept of integral human development that we use is configured on the correspondence between capabilities and human rights. The concept of capabilities is originally used by Sen as an element of a theory of social justice, and through the concept of instrumental freedoms (Sen 1999) is placed in relation to human rights. In our study, we introduce two main categories of capabilities identified in two different categories or *generations of human rights*, where the principal capabilities are included within these categories of rights. The two introduced categories of rights are related to the economic and political path that configures the evolution of DS. Both categories, in fact, refer to a historical path and do not represent an exhaustive definition of a set of capabilities, as proposed in other works such as that of Nussbaum¹ (2003). The concept of integral human development, to which we shall come, allow us to address some of the main criticisms of the theory of human rights by the most established developmentalist systems and other similar aspiring ones. The present section moves on a conceptual level and the first question we have to answer is whether the theory of human rights and the model of DS are analytically compatible. The answer to this question comes from the dual nature of the theory of DS. Effectively, it indicates at the same time a structural and ideological concept. It is a structural concept in terms of the state organization based on the embedded autonomy (Evans 1995) and the infrastructural power (Mann 1988). In this regard, we refer to that capacity of the state to penetrate civil society and to use this penetration to enforce policies throughout its entire territory. Concurrently, as stated by Mkandawire, the theory of DS also substantiates an ideological concept since the developmental project comes to be prescriptive and hegemonic, in

¹ In her work, Nussbaum comes closest to provide a capability theory of justice, but her ideas too don't amount to a full theory of social justice. Nussbaum's thought of social justice is inclusive, in the sense that it is not restricted to an account of political justice or to liberal democracies. More accurately, her account holds for all human beings in the sense of all mankind. The chief delimitation of Nussbaum's account is that it offers only "*a partial and minimal account of social justice*" (Nussbaum 2006, p. 71) by identifying thresholds of a record of capabilities that governments in all countries should assure to their citizens. So that, this theory focuses on thresholds, but this does not signify that entailing these thresholds represents whatever is required to social justice, leaving unaddressed the question of what social justice needs once those thresholds are reached.

the Gramscian view, of the national life: in particular, developmentalism become the mission of the state (Mkandawire 2001). If development is the primary public purpose, the development vision of the state can generate substantial differences in respect of political, economic and social issues. The theory of human rights and that of DS have much to discuss, especially not to incur in the imperfections of past experiences (Evans 2004, 2010; Mkandawire 2010). Indeed, the old DS had a vision of development based on the so-called economic catching-up. Several countries, principally the East Asian Developmental States (EADSs), have engaged in a strong competition to reach the economic level of the states already developed. Their economic policy has been focused on providing rapid industrialization with high rates of overall economic growth. This sort of emphasis on the economic point of view has resulted in a lack of attention to the protection of human rights (O'Donnell 1979). If the new model of DS will implement a different vision of development from the one designed in the old DS, then it will be able to overcome the past flaws and aim for a more sustainable pattern of development (Evans 2000). The economic literature on Developmental State has initially addressed little attention to subjects of human rights and democratization. The two subjects, as we shall see, are closely linked. Only recently has there been an update of the DS model in what is called in literature as the new DS or democratic DS (DDS) (among others, see White 1998). In addition, Thandika Mkandawire observes how in the past the idea of a democratic DS was considered a real oddity or at least a surreal characteristic (O'Donnell 1979) and the authoritarianism was considered an ordinary aspect of the state autonomy and capacity (Mkandawire 2010). An effective demonstration is the astounding economic performance of those countries belonging to the South-East Asian region in the second half of the Twentieth Century: this performance has inspired an extensive literature which does not hesitate to commonly speak of "East Asian miracle" (see for example the authoritative World Bank since 1993), also giving those countries the appellation of *Asian dragons* or *tigers*. A number of scholars have derived a pattern to follow, generating what G. Ralf Dahrendorf has called the *nouvelle vague* of economic policy (Dahrendorf 1995) that is to say a model that combines economic growth with social stability and, at the same time, political authoritarianism. Of course, even economists have been attracted by the challenge of establishing a new taxonomy for development studies and during the decade 1985-1994 many of them suggested a number of diverse theories seeking to explain the East

Asian miracle (Westphal, Kim and Dahlman 1985; Pack and Westphal 1986; Amsden 1989; Young 1993; Kim and Lau 1994; Krugman 1994; Rodrik 1995). There is unanimity among the various theories regarding the correspondence of some of the main determinants of the Asian miracle: all Newly Industrialised Asian Economies (NIAEs) experienced a rapid economic growth of their stocks of physical capital from 1985 to 1990 and were characterized by high levels of human capital investments. These surprising results have overshadowed the human costs of the rapid economic growth achieved by the standard application of the policy defined as Developmental State (Evans 1995). Only recently has the scientific community begun to consider these costs, in fact at the time of the first studies on DS, the theory of human rights was, and somewhat still is, subject to much criticism. Likewise, the theory of human development was just coming to light (Sen 1997). Now that the concept of human rights has achieved widespread international political maturity and the idea of human development represents a shared frame to investigate the complex issue of development, the model of DS can be re-interpreted according to these two contributions. On the one hand, therefore, the so-called Asian miracle can be viewed through the lens of human rights theory as it has evolved in the international law and economic policy mainly through the UN resolutions and conventions. On the other hand, the theory of human development contributes to look at development in a more integrated manner considering its multidimensional character. This allows us to re-read historical events concerning EADS by drawing useful indications for a possible updated version of the model itself. From a conceptual point of view, however, to address the issue of human rights and human development in relation to the model of DS requires a number of preliminary formalizations. Specifically, it is necessary to identify the relationships that may intervene between human rights and the concepts of freedom, state and development, revisited in the light of the integral human development. The first relationship enables us to evaluate the partial results achieved by EADS, as well as being the basis of the model of New Developmental State (NDS). The second relationship is essential since the model we are going to deal with is primarily a model of political economy. The third relationship, finally, allow us to introduce the concept of integrality of human development within our framework of analysis. The term *human rights* commonly indicates those “individual rights and freedoms that belong to the human person by virtue of his humanity” (Humphrey 1989, p. 21) or, in other words, “something that

belongs to every human being as a consequence of being human” (Renteln 1990, p. 47). On the cultural level in the world today, the international recognition of human rights can be traced back to Jacques Maritain¹, who led the philosophical Commission for the Drafting Committee of the Universal Declaration of Human Rights (UDHR). We will refer to his thought in the definition of integral development. Despite that, other authors such as Samuel Moyn trace the birth of the ideology of human rights in much more recent times, especially in the late Sixties (Moyn 2010). Since the first documentary sources, the issue of human rights became associated with the concept of freedom: the American *Declaration of Independence* of 1776 and the subsequent *Déclaration des Droits de l’Homme et du Citoyen* of 1789 are two fundamental examples in this sense. Many of the concepts interconnected to the idea of human rights date back to the French and American revolutions. The American *Declaration of Independence* states: “[...] *Uncertain inalienable rights, that among these are life, liberty and the pursuit of happiness*” (Declaration of Independence 1776, Introduction, in Armitage 2009). In particular, it can be argued that human rights are a fundamental forms of freedom (Sen 1999a). Thus, they can be translated into as many types of instrumental freedoms considered by Sen as elementary capabilities of the individuals (Sen 1985). In fact, freedom is at the base of development with a constitutive and instrumental role. Sen defines development as the expansion of human capabilities through the promotion of five instrumental freedoms: political freedoms, economic facilities, social opportunities, transparency guarantees, protective security (Sen 1999a). The concept of capability is being used by Sen to resolve the conflict between human rights and collective goals: if on one hand the search for the common good restricts individual choices, its pursuit allows the person more choices and capabilities that otherwise would be impossible (Sen 2000). Accordingly, the democratic confrontation and the search for development intersect with the same idea of freedom and, hence, of human rights. The human development approach is a binding conceptual result and constitutes the vision of development at the base of the new theory of DS (Evans 2010). It should be noted how the rights are not subject to democracy nor to the

¹ His interest about this theme can be found, among others, in his *The rights of man and natural law* (1942) and *The man and the state* (1951). The latter, in particular, shows the characteristic of personalism and the fundamental significance of man. The work, in fact, claims the primacy of human person in the state because this last is just an instrument for the humans and it insists on the concept of democracy whose foundation is the human person: for this reason, he recalled rights as an expression of dignity.

state, existing in the person as such (Scalisi 2010). The connection of human rights to life and forms of the state was also recognized by the French Revolution. The Declaration of 1789 states that “[...] *l’ignorance, l’oubli ou le mépris des droits de l’homme sont les seules causes des malheurs publics et de la corruption des Gouvernements [...]*” (Assemblée Nationale Française 1789, Préambule). Historically, it is precisely in response to forms of totalitarian government that states are concerned to formalize a commitment to protection of human rights: states can carry out a dual action in the protection of human rights. Firstly, it may be asked them the enforcement of certain rights or, secondly, may be required to states a dynamic intervention leading to significant changes to promote the flowering of new rights. This distinction is highlighted depending on whether the rights in question belong to the first generation, those rights immediately and abstractly applicable, or to the second generation, in which case it is essential for their implementation the concrete action by the state. Traditionally, the rights of the first generation are the first that governments have tried to protect, those rights we now call civil and political ones. They summarize the effective freedom of the individual towards the state. The rights of the second generation are those that we define economic, social and cultural rights: the state must guarantee for their implementation in order to achieve the best fulfillment of the potential of individuals. In addition to the two mentioned generations of rights, there exists also a third generation of rights that appeared in the second half of the Twentieth Century: it is the so-called generation of solidarity rights. This last involves all social actors, from the state to individuals passing through institutions and international organizations. In this latter group of rights, Vasak recognizes the right to development as well as to peace (Vasak 1984). The transition from first to third generation of rights requires a further reconsideration of the relationship human rights-state so effectively abridged by Scott Davidson: “[...] *the phenomenon known as human rights is connected not only with the protection of individuals from the exercise of state or governmental authority in certain areas of their lives, but that is also directed towards the creation of societal conditions by the state in which individuals may develop to their fullest potential.*” (Davidson 1993, p. 24). At this stage of our study, the protection and promotion of human rights can readily be interpreted as an extension of capabilities and the realization of the integrality of human development on the heels of Sen and Maritain. The theory of human development as conceived by Sen formalizes what up to now has been

considered: Sen proposes a model of development able to regard more aspects of man as a human person, not just the physical well-being and self-interest (Sen 1987). For that reason, Sen's proposal adds the social relatedness to the standard microeconomic rationality. Sen focused on the need for an integral approach to human development (Sen 1999a). The aim of full flourishing of humanity is pursuable only by using an integrated approach to development that requires full recognition and protection of all human rights. This is why it is appropriate to outline some features of the integral vision of human development which will be laid throughout the present work. The idea of an integral humanism was present in the thought of Jacques Maritain (1956) who participated in the drafting of the 1945 Charter of the United Nations. The expression "*integral human development*" considered in this study was used for the first time by Giovanni Battista Montini (Pope Paul VI), who defined it as development which "[...] cannot be restricted to economic growth alone. To be authentic, it must be well rounded; it must foster the development of each man and of the whole man" (Montini 1967, paragraph 14), and following Lebreton's thought, "*we cannot allow economics to be separated from human realities, nor development from the civilization in which it takes place. What counts for us is man - each individual man, each human group, and humanity as a whole.*" (Lebreton 1961, p. 28). According to the human rights approach to development, the concept of integral human development is founded on the indivisibility, mutual reinforcement and universality of human rights. The UN Charter contains the purpose of promoting and encouraging respect for human rights and fundamental freedoms for all without any distinction. In particular, the UN Treaty confirms the concept of comprehensive protection of human rights stressing that "*democracy, development and respect for human rights and fundamental freedoms are interdependent and mutually reinforcing*" (Charter of the United Nations, art. 1.3). René Cassin summed up rights affirmed by the UN Charter in four points: 1) rights of the person; 2) rights which individuals enjoy in their relations with social groups; 3) political rights that are practiced to contribute to the public life of the state bodies; 4) rights that are exercised in the economic and social realms (Cassin 1982). In conclusion, the UN Charter potentially includes both the binomial human rights-freedom and the concept of integrality. The Proclamation of Teheran (1968) emphasizes the indivisibility and interdependence of all human rights. Twenty-five years later, the Vienna Conference on Human Rights (1993) returns to the universality and indivisibility of human rights:

“All human rights are universal, indivisible and interdependent and interrelated. [...] The World Conference on human rights reaffirms the importance of ensuring the universality, objectivity and non-selectivity of the consideration of human rights issues.” (I.5, I.32)¹. The need for the full implementation of human rights was also recently reiterated by Kofi Annan in his Report to the United Nations General Assembly on March 21, 2005: *“Not only are development, security and human rights all imperative; they also for reinforce each other.”* (Annan 2005, par. 16). The sole assertion of a particular human right is never enough, we need to focus on the protection of all rights for all men in order to accomplish integral human development. When this does not happen, we are faced with situations of partiality as those occurred in EADS. More specifically, we remark a lack of interest of politics and economics literature for the category of civil and political rights. In the face of an extensive analysis on institutional and social aspects of EADS, the issue of democratization and political rights has been addressed only recently. Starting from the analysis of the consolidated literature on DS, we can derive a partition of public functions and related rights of the second generation. About this aspect, Mkandawire identifies four main functions of the social policy of DS: protection, production, reproduction and redistribution (Mkandawire 2004). In attempting to reconstruct an epistemological framework within the integral human development approach and in order to come to an understanding of comparison between social functions and human rights, in Table 1 we compare the three frames so far identified: 1) the four UN legal pillars proposed by Cassin; 2) the instrumental freedoms recognized by Sen; 3) the four functions of social policy in the DS experience discovered by Mkandawire.

¹ Vienna Declaration and Program of Action, Vienna, 1993, I.5, I.32.

Table 1. Comparison between social functions and human rights.

<i>UN Charter</i>	<i>DS Social Politics</i>	<i>Human Development</i>
political rights	negative perception *	political freedom
relational rights	constraining perception *	transparency guarantees
socio-economic rights	protection	protective security
	production	economic facilities
individual rights	redistribution	social opportunities
	reproduction	

Source: our own elaboration based on Cassin (1982), Sen (1999a, 1999b), and Mkandawire (2004). * See Table 2.

The modern human rights framework has been subject to a wide array of interpretations, including ethical ones, critical considerations and controversies concerned with the origins of human rights, universality-versus cultural relativity, and the effects of Eurocentric liberal thought and socialist contributions on the international human rights agenda (Siraj 2011)¹. Similarly to what has just been pointed out, the theory of human rights has been the catalyst for various lively debates and heated discussions due to its transnational nature and its interactions with economic, social, political and cultural systems across different societies. In this study, we attempt to redefine those considerations and provide in-depth insights to reconsider that criticisms. In doing so, we focus our attention on the concept of integral human development as outlined above. Herein, we refer only to the criticisms that have arisen in those countries that have adopted or aspire to adopt the model of DS. More in detail, we refer to the criticisms of the political foundation as well as of Asian values and hierarchy. To thoroughly respond to these criticisms not only contributes to strengthening the theory of human rights, but it allows for a full implementation of the approach of human development in the study of DS. The first critical point is the theme of the foundation: not surprisingly, the theory of human rights is more a Western creation than an universal model. In this regard, Richard Rorty has defiantly associated the concept of human rights with a kind of fundamentalism, as those rights would be based more on tolerance and

¹ For a revealing analysis of contemporary controversies and issues pertinent to the human rights framework, see Donnelly (1999) and Ishay (2007).

sentimentality than on rationality (Rorty 1993). The political theorist Amy Gutmann has instead provided a model of “*plural foundations*” in which each culture has its own foundation of common rights and the pluralism that results helps to make more acceptable the worth and effectiveness of human rights. As already affirmed by Maritain “*we agree about the rights, but on condition no one asks us why*” (Maritain 1948, I) in which the emphasis is given to agreeing on rights, not agreeing on the reasons for rights. Nevertheless, the search for an absolute foundation is illusory because the group of human rights is poorly definable. Such search is perhaps meaningless to the extent that it is more important to protect the rights than justifying them (Bobbio 1990). As far as we have been able to ascertain, the issue of human rights is closely linked to that of freedom. In particular, we observe how the theme of human rights can be derived by strengthening the dialogue and constructive democratic dialectic. In whatever manner, it has been argued that neither human rights nor the very idea of democracy could coexist with different beliefs or cultures from the Western one. The expression connotes a system of social life characterized by the accomplishment of the aims of the state over the individuals and individual freedom in accordance with, or alleged, the tradition that originates from Confucianism. Basically, the combination of the theory of “Asian values” and developmentalism led to a particular manifestation of the ideology of DS. It implies that the civil and political rights can be legitimately suspended and implies, rather, that their suppression is necessary to achieve economic progress and resulting widespread material benefits. Values such as frugality, discipline and harmony of the group have become an ethical point of reference and a key factor for economic success, just as had happened to the Protestant ethic and the spirit of capitalism in Western countries as analyzed by Max Weber (Thompson 2004). This position can be examined from two critical perspectives: the first on the legitimacy of rights and democracy within the Asian culture, the second on the hierarchy of human rights and the right to development. The works of Sen allow to provide answers to both critical perspectives. On the issue of democracy, Sen also notes that the Asian, African and Arabian countries have a “*long traditions of encouraging and protecting public debates on political, social, and cultural matters*” (Sen 2003, p. 29), even if this is not always recognized in the history of democracy. This means we need to debunk the myth of Western exceptionalism in matters of tolerance. In this respect, Sen mentions the Erragudi edict, issued in the Third Century B.C. in India, a manifesto

coeval with the Greek and Roman philosophy which celebrates tolerance. The thought of Confucianism, which has greatly inspired the advocates of “Asian values”, contains information about rights, common good and, in addition, invites to oppose the misgovernment (Sen 1970, 1999). Besides all, Confucianism is just one of the many cultural identities in Asia (Sen 2003). At this point, the cultural basis of “Asian values” appears unfounded for the analysis in question. In spite of this, even considering “Asian values” as valid, Western values can still be accepted. Ideas and concepts do not cease to be universal only because they were born in a certain cultural area or part of the world (Sen 1997). Sen had also considered the topic of Islamic culture, one of many in Asia and elsewhere, and its compatibility with democratic values (Sen 1999a). The recent so-called “Arab spring” can represent in this manner a natural laboratory for the model of DDS, the extent to which the emerging state apparatuses will be able to ensure democracy in those regions. Sen argues for a distinction¹ between two major attitudes or approaches to development, namely two possible views or visions of development: the first vision refers to approaches that see development a *fierce* process, which considers, among others issues, the whole range of social and democratic guarantees as “luxuries” to avoid (the hard or *blast* view of development); the second vision, instead, refers to approaches that see development as a *friendly* process, inclusive of those guarantees (the soft or *gala* view of development) (Sen 1997b). The pursuit of economic catching-up implemented by EADS obviously falls in the second vision depicted by Sen. Even those countries striving for the DS, such as South Africa and Botswana, claim for the priority of a strong economic development imperative as the only answer for starving masses rather than the protection of human rights: it is the so-called *full-belly thesis* (Howard 1983): democracy in itself does not guarantee to feed people, something that is indeed possible by means of a rapid industrialization. In other words, proponents of the *full-belly thesis* point especially to the history of the industrial revolution in Europe or to the success of the *Asian dragons or tigers* to vindicate their stand, insisting on the need to focus the people’s priorities towards meeting basic needs. The assumption of the *thesis* is based on the authoritarian character of some state apparatuses belonging to the

¹ Note that the Sen’s twofold categorization is not a partitioning. In fact, some development approaches may fit in neither group and some else can include particular features of each, so that each of which can appear in a pure or in a mixed form (Sen 1997b).

known *Asian dragons or tigers*, but there is no evidence that democracy has never prevented the industrialization and well-being of a country. However, Sen in one of his early work demonstrated the effectiveness of democratic forms of government in the prevention of famines (Sen 1982). So, by paraphrasing the *full-belly thesis* we can assert that democracy both as a principle and political conception and as a form of state (Schmitt 1923) cannot be eaten, but it allows to eat better than authoritarian regimes enable. Conversely, and according to Siraj (2011), what the human rights literature does not prove is a fundamental issue which is sternly considered by the proponents of *full-belly thesis*: did the so-called first world countries address civil and political rights in the same manner during the Industrial Revolution in the Nineteenth Century as they require the developing countries do nowadays? At the same time, new evidences are required to strengthen and endorse the case for civil and political rights in order to explain the adverse consequences of the recent financial crisis on the economies of democratic countries. Thus, from a hierarchical perspective, some African countries have implemented a *fierce* approach to development because of the existence of a pecking order of rights in which the right to development entrenches by itself and obtaining priority over other rights (Mkandawire 2010) and this system of ranking rights is summed up in the idea of “*development first, then the rights*”. The *thesis* is also linked to another theory in favour of the strategy of economic catching-up, the “*trickle-down*” theory of development, which originated during the Fifties of the Twentieth Century and embraced by the EADS (Tang 2000). According to this theory the effects of economic growth are reflected on the population turning into greater prosperity for all. There again, conventional wisdom thought of the “*trickle-down*” theory places emphasis on a sort of development which is purely an “*economic*” phenomenon, where rapid gains from the overall growth of GDP and per capita income would automatically bring greater opportunities to people in the form of benefits as jobs, entrepreneurship and other economic empowering activities (Todaro and Smith 2011). Therefore, the main concern is to get the growth job done while problems of poverty, unemployment, and income distribution are perceived to be of secondary importance. In fact, a similar theory can be disproved through three topics: 1) the historical analysis, 2) the theoretical profile, and 3) the approach of integral human development.

What we mentioned at the beginning of this section shows the historical sequence of the recognition of human rights through the definition of three generations of them. Such a division into generations is indicative of three instances of recognition with varying degrees of “urgency” and immediacy. From a theoretical point of view, in fact, the law is in itself a form of protection of individuals through the recognition of their natural rights as well as affirmed by the Jusnaturalism, or, according to Contractualism, through the recognition of the social contract. Only once the protection of human beings is ensured, then it is possible to extend the protection to larger dimensions of relationships such as collective dynamics and, consequently, the state. This latter cannot override the dignity and rights of individuals and, as we argued, this is not an exclusively Western assumption. Finally, we consider the approach of integral human development with which we tackle the issue concerning the future perspectives of DS. In the model of DDS, indeed, the goal of the expansion of capabilities replaces that of the economic catching-up (Evans 2010). In this way, the protection of human rights, in terms of removal of particular unfreedoms and various sources of deprivation, coincides with the pursuit of socio-economic development and simultaneously neutralizes the question of priorities between different legal aspects.

3. The old model of DS and human rights

The Developmental State paradigm as a dynamic conceptual framework

In this section, we try to shed more light on the critical yet constructive analyses of some recent dynamics of state intervention from an heterodox perspective and apply them in relation to the developmental state literature. To this aim, we do not focus our attention on the perspective of public administration and development management, but we deal with the revival of interest in development economics, or at least, in its paradigmatic concern. The idea that the state could and should play a key enabling role in economic development dates back to the pre-modern mercantilist mindset. Broadly speaking, the occurrence of market failure and imperfections has long been recognized as the reasonable grounds for state intervention. In recent times, more than ever since the *Keynesian revolution* of the Thirties of the last Century, the expansion of state intervention and collective provision for macroeconomic purposes, particularly in coping with involuntary

unemployment, became perceived as an accepted norm (Habermas 1976)¹. Keynes argued that a reasonable enlargement of the government's functions is a basic condition for individual initiative to function productively. Such enlargement should involve "[...] *the task of adjusting to one another the propensity to consume and the inducement to invest*" (Keynes 1936, p. 380). Since the appearance of the modern state in the Sixteenth Century, scholars have developed a variety of approaches to understanding the process of development in different countries, the relative importance of the role of the state and markets within the processes of development, and the models and strategies of development that countries should follow (Law 2009). Of these approaches, the developmental-state paradigm and the world systems theory have been more functional in explaining the state's important role in fostering industrialization and economic growth, particularly in East Asia and Latin America after World War II. Despite the severe challenges posed by the financial globalization crisis that took place in Asia in 1997, we believe that an unorthodox approach to development still remains useful in explaining the interwoven interactions of the state and markets for development and competition within and between national borders. In this sense, the revival of interest in development economics after the overt failure of the so-called Washington Consensus² that underpinned the structural adjustment programmes of the Bretton Woods institutions. Given their focus

¹ The confirmed existence of market failure, in its various forms, occurs when the market fails to allocate resources efficiently, so that creates a deviation from the general equilibrium theoretically supposed in perfectly competitive markets (UNCTAD 2009). The state intervention becomes a systemic permanent feature that may be called a regulatory state, which is concerned mainly with setting the rules of the game. For an authoritative analysis on the economics of development which involves a focus on the state vs. market controversy, see Stern (1989).

² The Washington Consensus was visibly dominant in the beginning of the transition processes in Central and Eastern European economies. It has shaped policy "recommendations" from international financial organizations and has been supported and endorsed by well-known economists from the most influential universities in the world. It has affected to a large degree economic policies in many transition economies. Theoretically, it is based on a combination of (1) standard Neoclassical price theory, (2) standard macroeconomics and experiences of stabilization policies, (3) the claim for the trinity "liberalization, stabilization, privatization" in order to induce profit-maximizing behaviour, and (4) a broad body of knowledge in comparative economic systems emphasizing both that reforms delivering sure efficiency gains and both the complementarity of the constitutive institutions of economic systems and the disappointing experiences with partial reform in Central and Eastern Europe. However, the reality has demonstrated impressive shortcomings in this vision of transition, contributing to an important change of focus in the economic thought and to reinforce the institutionalist perspective, with the development of areas such as contract theory, political economy, law and economics, regulation theory, corporate finance, and other fields in applied economic theory (among others, see Roland 2000).

on stabilization and static allocative efficiency, and their deflationary bias, these adjustment programmes have failed to induce the kinds of structural changes associated with development (Mkandawire 2001). Moreover, the Asian financial crisis and the Neoclassical prescriptions that the International Monetary Fund (IMF) recommended raised questions on the suitability of the Washington Consensus to deal with issues of economic development. Interest in development economics has also been stimulated by the revisionist version of the period of government interventionism in the Twentieth Century, which claim that the period was not the absolute tragedy that it has been depicted. It was marked by rates of economic growth that have yet to be equalled in the era of globalization. For most countries, the industries that emerged under the government interventionism were the first move toward industrialization. In other words, these industries were not simply characterized by inefficiencies, but in a significant number of cases they enjoyed high productivity rates and created the foundations for subsequent venture into world markets. Many advances were made in health and education sectors. Revisionist writing on the Asian experiences also suggests that the Neoliberal reading of the Asian experience was tendentious and had minimized the fundamental role of the state. Undeniably, the developmental state can be considered as the result of a perception of the development process as updated by Keynesian and development economics, that is to say the policies pursued by such states were inspired by the *corpus* of knowledge stratified in the Keynesian and development economics achievements¹. Among others, a number of theoretical and empirical research efforts spent by distinguished development economists have been proposed from the *big push* (Rosenstein-Rodan 1943; Scitovsky 1954) or *critical minimum effort* (Lebeinstein 1963) or the *great spurt* (Gershenkron 1962), to the *hard state* for overriding conservative interests in favour of social reform and the process of *cumulative causation* (Myrdal 1957, 1968) into a virtuous cycle of positive feedback, up to identify *poles of development* (Perroux 1950). All these attempts were intended to get countries out of the low-level equilibrium trap or Malthusian stagnation and

¹ From the pessimism about the prospects of primary commodities-driven growth and counsel for export diversification through industrialization, to the strong attention on high savings and high investments, and the need for deliberate policies for resource mobilization; from the focus on manpower or education to the insistence on an active role for the state to address coordination problems; from the emphasis on market imperfections and the need for corrective state policies, to the recognition of that path dependence and the related impacts this had on late industrialized countries.

move them toward higher equilibrium to *take off* (Rowstow 1960). Moreover, common to all these attempt was the idea that economic development requires a state which can mediate political conflicts (Kuznets 1972) and regulate the economic and political relationship in supporting industrialization and market dynamics. Karl P. Polanyi (1944) had not differently observed much earlier that market institutions did not emerge on the spur of the moment, but rather on a regular basis depended extremely on state actions. Indeed the creation of national markets in the Western economies had historically coincided with the constitution and expansion of state institutions (UNDP 1999). According to Polanyi, even Adam Smith's invisible hand in *laissez-faire* capitalist system may still require the government's capacity in being the rule-maker and umpire as there is nothing natural about *laissez-faire* and free markets (Polanyi 1975). It is no coincidence that up until the Seventies of the last Century, difficulties and related problems of social protection or welfare and unemployment in the developed countries, and those of poverty and underdevelopment in the developing ones, were interpreted by the two scientific approaches of Keynesian economics and development economics respectively. The two approaches shared both critical views of Neoclassical economic theory and the intrinsic acceptance of state intervention. In particular, they shared the belief that the state could take part in the economic system with the important role to addressing structural features, which often resulted in market failures. Both Keynesian economics and development economics were induced by the need to frame and answer to policy issues and were not purely formal theoretical research fields whose modelling was based on real economies trapped in a particular equilibrium (unemployment or underdevelopment) from which they had to be extricated. These framework gave access to attack from Neoliberal claims (among others, see Mkandawire 2001) and the subsequent oil crisis, stagflation and indebtedness of the developing countries severely undermined and weakened the two approaches above recalled and that had supported welfare systems for Keynesian economics and development policies for development economics. It is perhaps not overwhelming that the Neoclassical counter-revolution and the rise of monetarism in the developed countries during the late Seventies and early Eighties led to the dismissal of Keynesian and development economics. For the Neoliberal economic thought, Keynesian and development economists mistakenly rejected theories of rational choice and expected utility and their focus on mechanicisms of standard economic

theory introduced government control. For some Neoclassical economists, the whole project of development economics was a fruitless one, and the government control associated with it was blamed for poor economic performances. Not only that, but some of them went so far as to clearly suggest that all was not well with the discipline of development economics (Thirwall 1978; Hirschmann 1981; Lewis 1984, among others).

The renewed call for “development economics” is not inspired by a melancholic and passionate devotion to developmentalism, nor does it presuppose simply resuming where one left off. Rather, it is characterized by the deadlock of the Washington Consensus and the promptness of the agenda that development economics tried to tackle (extirpation of poverty through economic development and fair redistribution of income and wealth). However, in the light of varied conditions and different experiences, the new “development economics” will have to address a series of new problems in a greatly modified global context. Thus, significant modifications occurred are the changed international context, changes in economics, new views of the state and the new social agenda (Mkandawire 2001). In particular, in the field of economic studies have been valuable some Keynesian contributions in which played a significant role in development planning, for example the Harrod-Domar model and other neo-Keynesian models linking savings, income distribution and technology to economic growth have also been present. Then, it was necessary to ensure greater realism in order to represent and explain both for the disappointment of economic convergence among countries as predicted by standard Neoclassical growth theory and for the deviating performance even among countries with the same level of economic development. Concern with issues such as economies of scale, human capital and the role of information recalled those topics that were central to development economics, and suggested the same function for the state in the development policies. At once, a growing number of economists accepted that the concept of developmental state had been instrumental in the high-performing EADS. They recognized the need for a developmental explanation for such performances considering several issues such as economies of scale, imperfect information, learning by doing and structural rigidities, which, in turn, revived interest in the issues that were central to development economics subjects of missing markets, the need for planning to address coordination problems, the importance of regulation and the intrinsically imperfect nature of financial markets, the lumpiness of

investment, and others (Matsuyama 1997). This has contributed not a little to what Paul Krugman pointed out as the counter-counter-revolution (Krugman 1992). Therefore, the concept of the developmental state regards the role of the state within those processes of structural transformation and its paradigm derives from the above reconstructed, even if in brief and fragmented, dynamic conceptual framework. The arguments that make the DS a paradigmatic tool for economic analysis deal with the role of the market and that of the state in the economic system and the resulting range of economic policies in leading to high and sustained economic growth and that correspond with the transition from a largely primary product based economy to an industrial one. Last but not least, in the socio-economic literature it is noted very frequently a combination between the DS as a paradigm and the notion of DS as a tool of analysis.

For a more detailed account, the DS rooted its conceptual framework already in the American protectionism of the Eighteenth Century, the German protectionism of the Nineteenth Century and the Japanese and Latin American import substituting industrialization programs of the late Twentieth Century (Chang 2007; Fine 2011). Recently, having been developmental states most prominent for Newly Industrialized East Asian Countries (NIACs), has there been the emergence of the conceptualization of the perceived role of the state in those East Asian economies (in particular Japan, South Korea and Taiwan) which experienced outstanding levels of sustained economic growth from the Sixties to the Nineties of the last Century (Page 1994). As previously argued, developmental states have effectively and intellectually contrasted the Neoliberal Washington Consensus and its aversion to the state that arose so vigorously and actively straddling the end of the Seventies and the beginning of the Eighties of the Twentieth Century. By emancipating the political economy of Asia from the economic growth paradigm, the empirical experiences of developmental states have included Japan, Taiwan and South Korea¹, which constitute the so-called *first tier* developmental states. Progressively, the newly industrializing East Asian economies of Thailand, Malaysia and Indonesia have also influenced the debate. Nonetheless, it is important to note that the expression “developmental state” was first used with reference to Latin

¹ This is famously documented by Amsden (1989) and Wade (1990, 1993) and Johnson (1982) for South Korea, Taiwan and Japan.

America (Woo-Cummings 1999). The focus on the *first tier* developmental states should not be taken as a universal methodology given the international economy contextual transformations associated with globalization. Addressing the set of countries referred to as *first tier* is essentially as a starting point, in order to analyze the paradigm of DS as a dynamic conceptual framework regarding the process of development. Additionally, the reality of delineating the conceptual framework necessitates the possibility of clarity, ex-post, of the achievement of successful structural transformation and hence “developmental state” status, as is the case with the *first tier* developmental states (Ikpe 2008). From the 1970s, many countries in the Western world began experiencing a fundamental change in the development paradigm (Esman 1991) which denoted the beginning of an era characterized by threats and enticements to developing countries to be consistent with the leading new economic order of retracting the state intervention in the economic system, which was done, among other strategies, through the economic Structural Adjustment Programmes¹. Nevertheless, while this is also relevant to the idea that the developmental State would be dead, particularly following the East Asian Financial crisis, we prudently believe it may be too early to announce the death of the developmental state in Asia, even though they were going backwards (Stubbs 2009; Hayashi 2010; Carroll 2012). The prudence is especially pertinent as in order to address the reality of the current era of globalization amounted to the evolving patterns of production, consumption and

¹ Structural Adjustment Programmes (SAPs) are economic policies for developing countries that have been promoted by the World Bank and International Monetary Fund (IMF) since the early 1980s by the provision of loans conditional on the adoption of such policies. Structural adjustment loans are loans made by the World Bank. They are designed to encourage the structural adjustment of an economy by, for example, removing “excess” government controls and promoting market competition as part of the Neoliberal agenda followed by the Bank. The Enhanced Structural Adjustment Facility is an IMF financing mechanism to support of macroeconomic policies and SAPs in low-income countries through loans or low interest subsidies. SAPs policies reflect the Neoliberal ideology that drives globalization. They aim to achieve long-term or accelerated economic growth in poorer countries by restructuring the economy and reducing government intervention. SAPs policies include currency devaluation, managed balance of payments, reduction of government services through public spending cuts/budget deficit cuts, reducing tax on high earners, reducing inflation, wage suppression, privatization, lower tariffs on imports and tighter monetary policy, increased free trade, cuts in social spending, and business deregulation. Governments are also encouraged or forced to reduce their role in the economy by privatizing state-owned industries, including the health sector, and opening up their economies to foreign competition (WHO 2007).

investment, as it is also possible to find in Booth (2002), and Akyuz, Chang and Kozul-Wright (1998).

The definition of the DS paradigm, in the sense of Thomas S. Kuhn (1962), should be based upon the perception of its incidence in order to configure a conceptual framework for grasping the role of the state in development processes on wider foundations. With reference to the incidence, we have recognized the cases of the *first tier* developmental states and as such, the basis for which they have been classified as cases of developmental state. These considerations give reasons to the purpose of the label expression “*developmental state*” as a premise upon outcomes, and “*developmentalism*” as an identification referred to the subsequent economic successes and structural transformations of a number of economies as strictly highlighted by the experiences of Japan, South Korea and Taiwan (Ikpe 2008). The closely-related literature has been dealt with by Fine (2006) as being classified in the economic and political schools depending on the perception of the primary impetus behind the impressive economic outcomes of those economies. This has resulted in a dual approach within the DS paradigm of what may be considered the economic and political roots of the role played by the state in promoting development. In fact, according to the economist Benjamin Fine and in line with the DS paradigm, we may divide the developmental state literature into two different schools of thought, one as the “political school” and the other as the “economic school”. For Johnson (1982, 1995, 1999) and the political school, the principal issue to address is whether the state has the makings of becoming developmental and promoting prosperity and well-being. In this respect, the state plays a similar and complementary role to what John Maynard Keynes emphasized by pointing to the hidden flaws of capitalism in order to save it from itself. In fact, the distinction with Keynes’s idea of state intervention is in highlighting the pervasiveness and the range of functions of the state-led industrial restructuring for Johnson instead of the state-manipulated aggregate effective demand for Keynes. On that regard, Castells (1992) helped to find a widely accepted and cited definition of the developmental state: “*A state is developmental when it establishes as its principle of legitimacy its ability to promote and sustain development, understanding by development the combination of steady high rates of growth and structural change in the productive system, both domestically and in its relationship to the international economy.*” (Castells 1992, pp. 56-57), in which, ultimately,

the economic development is not a purpose but a means, and the condition to be developmental focused on its relative autonomy (Evans 1992, 1995). This entails certain consequences on the specific nature of the connections and perspectives between state and society, and especially what makes them functional rather than non-functional¹. Unlike the political school, the economic school is concerned exclusively with thinking and designing accurate macroeconomic policies, or the rationale for them, as opposed to the political (and ideological) conditions that make them possible (Fine 2010). This second school of thought focus on those imperfections and failures that the market creates and on the intervention of the state to correct them in order to promote development (Amsden 1989; Wade 1990). This is indicative of a general economic function of the state, especially in industrial and trade policy as well as in state control and allocation of finance for investment. What is more, the economic school has also paid attention to particular case studies, with the newly industrialized East Asian economies in the limelight, reflecting its prevalent concern with challenging the Washington Consensus and the latter's refusal of the idea of industrial policy. By relying to the deleterious presence of market imperfections, substantial evidence is gathered to the effect that development has only been effectively attained, mainly for the late industrializers, through extensive state intervention and, as a result, in contrast with the policy recommendations from the Washington Consensus (Chang 2002).

Definitions of DS and its temporal paradox

Issues closely-related to development, states, and markets were raised at different stages in the literature of development, predominantly in the disciplines of development economics and international political relations. Main approaches to development involve modernization theory in the Forties and Fifties of the Twentieth Century; dependency theory, world systems theory, and the developmental-state thesis from the Sixties to the Eighties. The theory of DS was elaborated to answer to the world-system theory (Wallerstein 1976, 1984) re-stabilizing the role and centrality of the state in the socio-economic process of development. It denies the linearity and

¹ For White (1998), the efforts to design and construct a democratic developmental state would have to include factors such as consensus, institutions, political participation, authoritarianism, social inclusion and exclusion, international environment, and social structure comprising class, gender, ethnicity, culture and religion.

universality of the process of development, basing on the idea that the state has a key role in the definition of the economic development process. Underling the unicity of each country in the definition of its proper historical process in relation to social class dynamics and to the strength and autonomy of each same country, the theory of DS results as closely linked to the economic idea of *path dependency* (in that regard and among others, see Shapiro and Taylor 1990; Haggard 1990; Lauridsen 1993; Rodrik 1995; Low 2004; Pei 2006; Studwell 2007; Beeson 2002, 2009). As Linda Low argued, *“Typically, path dependency prevails in policy-making, defined as the set of dynamic processes whereby small events have long lasting consequences which economic action can modify, but only to a limited extent. It is different from past dependency because path dependency can accommodate the consequences of actions at each point in time. It is systematic and dynamic to focus attention on the change process which is generated by the interaction of a variety of agents whose behavior is constrained by their localization in time and space. Path dependency is analytically generated by the overlapping of irreversibility, indivisibility and structural change.”* (Low 2004, p. 163). Moreover, despite economic challenges such as globalization and the Asian financial crisis in 1997, it is noticed changes so far have not significantly moved beyond the earliest policy path grounded in a developmental state with productivist purposes. So that, path dependency is still very much at play, supported by the institutional continuity. Such policy stability, mainly in the East Asian public governance experience, including social policymaking, *“[...] can be explained by the longstanding bureaucrats-dominated nature of public policy making in addition to the state-led economic development approach to policy interventions. Some public services have historically been developed and expanded not for the sake of independent social policy values, but as instrumentalist complements to the developmental agenda and related political objectives.”* (Cheung 2009, p. 2). Social issues have mainly been introduced not out of wellbeing considerations, as occurred in the Western experiences, but as a result of a fiscally and economically driven development agenda. The hallmarks of this agenda are represented by *i)* economic nationalism; *ii)* the emphasis on the maximization of the market shares more than the profit maximization; *iii)* industrial protectionism; *iv)* developed bureaucracies of government; *v)* corporatism forms (alliances by state, workers and industrial owners); *vi)* skepticism towards Neoliberal claims and its contemporary “brand”, the above reminded Washington Consensus (see footnote No. 8); *vii)* the priority

of economic growth more than structural reforms. The definition of DS as the state that sets specific development objectives and moves the whole society to achieve certain levels of industrialization (Johnson 1982) was referred to Japan at the beginning, but it can be relevant also for other East Asian Developmental States with different historic political shifts. In fact, the theory of DS refers to all those centralized states which benefit from a prominent position in relation to the private sector to achieve their development goals (Wade 1990). The vision of the development of EADS has strongly influenced the establishment of both objectives and policies adopted to achieve them. The relatively backward starting position of these countries, compared to the economic position of the developed countries, has led them over time to identify the domestic development with the achievement of the Western economic standards (*catching-up of Western economics standards*). That vision has resulted in a development policy focused on achieving rapid industrialization, supported by demanding high levels of manufacturing performance taking into account the broad spectrum of public incentives and guarantees. From the economic standpoint, these countries displayed comparable features arising out of their headway results deemed as “miraculous”. However, the development strategy based on the merely economic catching-up has not proved to be adequate to fulfill civil needs and, principally, the achievement of high political and social standards. Consequently, the radius of analysis increases if, following Chang’s indications, we extend the Johnson’s definition to all those countries that are in a particular historical moment have intervened “*to promote economic development by explicitly favoring certain sector over others*” (Chang 2010, p. 83). Therefore, a wider definition allows us to address a larger number of issues, especially those that focus on political and social issues. There again, the conceptualization that we are framing, does not allow to maintain a wider extent as would lead us to broadly two considerations. First, the concepts we have exposed can be applied to more extensive analyzes by changing the size of the starting point definition. Second, an analysis by a narrow definition is intrinsically a limitation, but also a guarantee of a more adequate analytic framework¹. We opted to

¹ The choice of the range definition appears as a problem of indeterminacy or uncertainty, according to which there is a trade-off between the extension of the case studies considered (number of countries) and the accuracy of the analysis (analytical capacity), along the lines of Heisenberg’s *uncertainty principle*. Indeed, due to a probabilistic theory, in physics the Heisenberg uncertainty principle asserts a limit in our ability to simultaneously know certain facts.

consider the historical case of EADS in our conceptual analysis. Today the natural field of application of the theory of DS appears to be that of some African developing countries. In this regard, the EADS represented the ideal standard for all aspiring DS until the onset of the Asian financial crisis of 1997. In our conceptual analysis it becomes clear, for all that, how many elements can be used also in the understanding of other cases of DS, and similarly as some elements may not to be present in all experiences of EADS. This will enable us, in the course of the analysis, to show some of the problems to which the new generation of DS will have to pay attention. In particular, the proposition of the so-called double-track of the old DS and the new DS makes it possible to reflect as much on the experiences of development in authoritarian states, as on the applicability of DS to the emerging contemporary democracies. The above-mentioned “Arab Spring”, which we witnessed in 2010, with the birth of precursor democratic systems in a few North African countries, may constitute a new springtime both for a local anticipatory democracy and the new theory of DS.

The first analyses on DS concentrated efforts on the role of the policy-making process and of institutions providing the key concepts of state-led development beyond the market (Wade 1990, 1993; Evans 1995) by turning attention to the approach allocation decisions were shared between markets and public institutions and the synergy between them. This first studies stressed the links between firms, banks, governments, international financial markets and the International Monetary Fund, drawing a new agenda for national and international development policy (Wade 2003). In this work we take as a point of departure the configuration of these first analyses in order to investigate the relationship between the strategies aimed at achieving the economic catching-up and those targeted at promoting human rights. It is a relationship that leaves no room to the mythicization of the model of DS. The relationship, in fact, appears at a glance somewhat ambiguous because the EADSs have experienced increasing investments in the social field, but the rapid economic and social growth has often been supported by authoritarian regimes and no or little democratic gains. Obviously, when we make reference in this work to the idea of authoritarian state, we refer to the experience of countries such as South Korea rather than to the Japanese one. We pay attention to two crucial aspects: the paradox between the objectives of the policy making process, noticed through time horizons, and the perception and promotion of human rights. The paradox of the old DS

resides in an exchange of roles between economics and politics. In summary, we recall here how development economics has shifted from the study of temporal drivers, based on short-medium term relevance (typical of the Neoliberal doctrine), to the study of long-term elements: in this regard, the growth theory of Solow (1956) is emblematic of the new time horizon considered. On the contrary, the policy of the old model of DS has focused on aspects of short-medium term, as the economic performance and industrialization, ignoring the field of long-term relationships. Human rights are part of the latter field because by their very nature fall within the scope of the state-citizen relationships. The discrepancy found is evidently not related to the temporal character as to the consistency between roles and objectives of political and economic development. The solution to the paradox seems further away if we consider that EADSs were almost immune from having to deal with the institutions and policies based on the so-called Washington Consensus (Chang 2002a) until the Asian financial crisis in 1997. After that crisis, South Korea became one of the fastest recovering economies managing to repay all loans to the IMF three years earlier than due (Hwang 2006). Nevertheless, a possible solution to the paradox lies in the same peculiarities of DS. The problem can be simplified taking into account two features of DS, which play a central role (Leftwich 1996): the domestic political legitimacy and the economic competition with other emerging countries. The socio-economic results achieved by developmentalism regimes allow authoritarianism to have legitimacy in the public opinion. This occurs according to the above full belly thesis according to which the state first must pursue development goals and afterward those related to democracy. The economic results, indeed, provided the government of DS with instruments, arguments and material equipment in order to respond to the domestic opposition. The other variable on which is based the paradox is the competition between emerging countries. The authoritarian state makes use of quantitative results arising from the strategy of economic catching-up as a form of defense from neighboring countries and diverting attention from the political objectives. The historical case of EADS shows how strong the weight of the competition and the role of nationalism in development projects (Castells 2000). It should be noted that a typical element of the policy of DS is the implementation of the development agenda. It is of the utmost importance that governments measure progress via instruments, such as the development agenda, in order to ensure and facilitate accountability as well as decision-making. This latter

instrument, while making reference to a long-term path, aims at flexibility of choices in the short term and is primarily focused on the industrial economy (UNCTAD 2009, 2012). After analyzing this paradox, it is possible to better understand the extended definition of DS mentioned at the beginning of this work. In fact, Chang invites to overcome the definition of developmental state narrowly limited to countries that derive political legitimacy from their record in economic development which they tried to achieve mainly by means of selective industrial policy (Chang 2010). In addition, Mkandawire's remarks on African countries aspiring to implement the model of DS seem to confirm as the "temporal paradox" of DS is a typical result of the ideology of the state developmentalist aimed at macroeconomic planning. If the first African leaders were concentrated on the known *politics of nation building*, the new generation of policy makers are focused on *economics of nation-building* (Mkandawire 2001). In itself this does not imply a danger to the extent that the policy does not overlook human rights. In this perspective, development policy is exclusively led by economic indicators relevant to the internal legitimacy for international recognition and for attracting foreign capital. The structure of conceptual analysis so far conducted are likely to disregard, if not to ignore, the internal aspects related to human development. Our analysis at this point must take into account two levels: the political level and the economic one. To do this we provide a scheme of perception. Such a scheme will enable us to observe the type of perception of different categories of human rights in relation to the political and economic objectives of the state. For this reason, we outline more carefully the characteristics of the policy of economic catching-up of EADS. The state becomes, in fact, an entrepreneurial agent through a policy of investment selection and rapid industrialization (Chang 1994) and the DS establishes objectives and economic policies in terms of export promotion, investment in human capital and allocation of credit (UNCTAD 2007). The entrepreneurial attitude of DS considers investments in human capital as an instrumental way to achieve economic objectives. This leads to a partial perception and promotion of human rights. Thus, the rethinking of developmental state highlights a remarkable case in examining how domestic and external influences for change can bridge the gap and how democracy can become public goods for development in several countries. The analysis of developmental state may also give us some indications with regard to the issue of conversion versus diversion of the capitalist system (Lim 2009). Some scholars argue that modes of capitalism would converge

along with thickening of the integration and interdependence of economies and international markets. But, according to the *varieties of capitalism* argument, different modes of coordination across countries persist notwithstanding having the same structure of capitalism such as the coordinated German market economies - CME - compared to the American liberal market economies - LME - (Hall and Soskice 2001; Lim 2007).

Scheme of perception of human rights

Many studies on EADS revealed the central role of public bureaucratic apparatuses: a combination of high transmission capacity of political guidelines and embeddedness with the private sector (White 1988; Evans 1995). However, the ability of the DS is incorrectly conceptualized if one does not consider, together with the administrative capacity, even the political capacity of the government. First, the particular internal configuration of the DS ensures that into the policy-making process are represented only some stakeholders with the absence of civil society and social capital. It so happens that policies addressed to the benefits of citizens are expressed only in according to the interests of the state or, at most, to the industrial sector. Secondly, one can not address the issue of human rights in the DS without taking account the political rights. It is true that the expansion of capabilities certainly includes what Bonvin and Galster (2010) underline as *the capability for work*, the “*bettering of a human life does not have to be justified by showing that a person with a better life is also a better producer*” (Dreze and Sen 1995, p. 184). Furthermore, the expansion of capabilities passes through an efficient supply of public goods and services, but it is also necessary a good level of democratic institutions (Acemoglu and Robinson 2008, 2012).

Early work on the DS did not take into account the social dimension preferring a Neoliberal approach. As a result, the various analyses were concentrated to the extent of economic growth (Holliday 2000). Subsequently, the analyses also took into account the role of social policy and, in this respect, Mkandawire appropriately notes that one of the main functions of social policy is the production and reproduction of human capital (Mkandawire 2004). The breakthrough is significant, especially for the convergence of this new approach to the study of DS to the concept of human development. Human development incorporates the concept of

production and reproduction of human capital by including it into an integral framework of protection of human rights and expansion of capabilities. This vision of development enables us to assess the partiality of the results achieved by the old model of DS. We recall here the distinction between the first generation of human rights and human rights of the second generation (Vasak 1984). The first one falls in the relationship between state and citizen, without the need for special interventions to promote their content. In relation thereto, one can refer to rights opposable to the State where the citizen limits, in a certain sense, the field of choice of the state itself. This category was rather neglected by the first analyses on DS, which were often restrict to investigating workers' rights or the protection of property. On the contrary, the human rights of the second generation fall into the category of rights arising from the provision of public goods and services. So that, it is possible to argue about rights perceivable by the state in which the citizens ask the state to meet their basic needs. In this category are the social policy interventions carried out by the DS and on the basis of which progress has been made in the socio-economic literature (Krugman 1994; Mkandawire 2004; Lee and Ku 2007).

We are faced with two categories of human rights with different degrees of protection. We try here to explain why the existence of these two categories through a pre-analytical conceptual path, in which the reader may recognize a number of elements experienced by EADS. Our analysis has identified some factors that delay the protection of the first category of rights and some other factors which restrict the second category. The first result of our analysis is a scheme of the relationships between human rights and economic and social policy of EADS. Human rights were perceived by government authorities on the basis of their economic growth target. Hence, by pursuing the goal of economic growth, the policy-making process has been addressed towards the repression and/or protection of certain rights. The scheme proposed (see Table 2) shows the scope of the *social compact* between the state and its citizens with its implications, in which each macro-level category of rights is connected with its mode of perception within the policy-making process. More in detail, for the first generation of human rights we look both at the government's internal viewpoint, that is the relationship between claimable rights and the domestic priority of economic growth (*1a*), and at the government's external viewpoint, that is the relationship between claimable rights and

international connections of DS (1b). For the second generation of human rights we look both at the government's perception from the internal perspective, that of political legitimacy (2a), and at the government's perception from the external perspective, that of competitive advantage (2b).

We use here the word "perception" for two reasons. Firstly, because the scheme of analysis proposed is addressed to interpret as the government of DS considers human rights. Secondly, to denote our position as researchers: who writes, of course, does not consider human rights as instrumental variables and least of all negative variables for the development of a civilization. From the viewpoint of the government of EADSs, it is possible to find the cause of the sluggishness with which the protection of the first generation of human rights was extended. And in particular, we have tracked two characteristics of the perception of these rights by the central governments in line with the strategy of economic catching up pursued. The first characteristic is intrinsic to the priority development objectives set by governments and their priority-setting process, with constraining effects on the perception. The second characteristic is extrinsic to governments' point of view, with negative effects on the perception. The nature of the claimable rights is difficult to reconcile with the policy of some kinds of EADS, since it constitutes a limitation to the freedom of action by the state. One can, thus, understand the attempt of some authoritarian states to resort to martial laws. This is the case of South Korea which experienced the adoption of martial law: the president Park Chung-hee declared martial law in 1972 and recast the constitution into a highly authoritarian document. Nevertheless, the greater protection in terms of human and political rights are still internationally guaranteed even during a conflict¹. The fact itself that these rights are included in a system of international protection is a further limitation because it submit governments to the attention of other governments, to the inspection bodies and non-governmental organizations (NGOs). The literature on DS has highlighted the growing role of international regulation of the economy, and its role in potential future developmental states; equally it was not for the growing international humanitarian law. That

¹ Just think of the UN Charter of 1956, or the Geneva Conventions of 1949 and the additional Protocols of 1977.

regulation contributes even more to make the EADS of the Seventies-Nineties of the last Century a unique historical and political example. The representativeness is intended in the present analysis as a degree of participation even more elementary than the deliberative one, understanding it also as the informal opportunity to take part in the process of policy formation. The absence in the decision-making bodies of those who are concerned with the protection of this category of rights leads to lack of perception of such needs, though fundamental needs. We refer here to the individual citizens, but also to the various social classes such as the bourgeois class and the working class (Kim 2010). Recognized this lack of representation of human rights, our opinion on extrinsic perception is not yet completed. The lack of participation, indeed, brings with it a greater demand for democracy. The latter takes the form of opposition and is seen as a threat to developmentalist authoritarian governments. In this sense, the extrinsic perception by the government becomes clearly negative. Can we transfer this model to the reality? The constraining and negative perception should be read within the political logic of DS identified at the beginning of this section. The historical experience of DS, not surprisingly, delivers to us a picture of mostly authoritarian states, led by totalitarian regimes or by despotic political components, with an exclusively conservative orientation. The EADSs have removed any hindrance to the strategy of economic catching-up, even at the cost of strong internal contestations. For example, we reread in this frame the affair of trade union rights in South Korea and the key role of the different social classes in the application of democracy (Kim 2010). At this point, one can sense that to place human development as a policy objective can change the result of the relationships proposed so far, but we will deal with of this in the next section.

The second generation of human rights is usually linked to the availability and provision of merit goods¹. The category of human rights as merit goods is rooted in Georg Hegel (1821, En. tr. 1991): since there are specific domains in which the government has a regulatory duty, the idea of merit good has a wide applicability. This concept not only applies to a number of economic activities and the acceptability of their level of production and

¹ In general, for *merit good* we mean a good which is deemed to be socially desirable, and which is likely to be under-produced and/or under-consumed through the free-market mechanism. The merit good argument was introduced in the economic literature by the public-finance economist Richard Musgrave (1956) even though it has its roots in Georg Hegel (1821, En. tr. 1991).

consumption, but it also denotes the institutional arrangements imposed on consumers and producers in order to make the market work and make it work efficiently and humanely (Ver Eecke 2008). According to Hegel, the economic system should achieve three goals: to provide goods and services required to satisfy the needs of people, to make available opportunities in order to earn recognition in work and to foster a preliminary form of social integration that is thereafter accomplished by the state. In the Hegelian view of the ontology of the economic domain, the free market is important but it cannot provide the contributions it is supposed to make to achieve human freedom. Without ascribing the free market any glorifying status that it clearly does not have, the Hegelian standpoints give the government an extensive role in achieving human freedom and, more specifically, the government has a function in the economic order that goes beyond the function described as the *minimal state*, or even as the *productive state*¹. Furthermore, merit goods more than micro-economic issues involves macroeconomic efficiency across the business cycle, justice and, especially, human dignity. This is finely what the current social protection systems tries to do with its economic stabilization programs, its redistribution efforts, and its social programs (Musgrave 1956, 1971, 1987; Ver Eecke 2008). Richard Musgrave argued that inferring well-being uniquely from revealed preferences is incorrect due to the occurrence of what he first called merit goods. Among other functions, merit goods provide protection and advocate human interests, not merely serving our preferences since they worth more than what would be revealed from the choices of people. Many scholars have maintained, for example, that we should not accept democracy exclusively from the intensity of the preferences that citizens display for democracy, because democracy is one of the most basic merit goods. Akin to this, human rights represent a particular category of merit goods, among which fundamental rights are an extreme form given that they are not negotiable. Rights, in general, do not contrast with preferences, of course; what they do is to strengthen some preferences against the claims of other, less necessary, preferences and interests. In this regard, the second generation of human rights has found greater protection within nationalist-developmental policies than it was

¹ In economic theory, the function of the *minimal state* refers to the protection of life and property by the state bodies. Instead, the *productive state* refers to the state when it helps individuals produce public goods (among others, see Buchanan 1975).

the case for the first generation of rights. If we apply the scheme of perception (see Table 2) to the structure of decision-making process, it is possible to remark how the protection of these rights takes place in a partial way and is instrumental to the achievement of economic growth. Our analysis is condensed, therefore, on the detection of the points of intersection between the elements of social policies, especially those related to welfare systems, and the determinants of the strategy of catching-up. The human rights of the second generation are intimately linked to the survival and reproduction of human capital, not as an highest human and social value, but rather as a factor of production of externalities merely aimed at achieving objectives of economic growth. The perception by the DS reflects what according to Amartya Sen (1999) is perhaps the most negative way of looking at human capital: a mere factor of production having to be efficiently maintained and updated. In such a context, in fact, human capital is a nerve centre for the pursuit of goals both based on political legitimacy by the people and on international competition. Economic development had not always precedence over the social development, see for example the case of Hong Kong and Singapore (Aspalter 2006) even today come to the fore for the conquest of more democratic state and government forms. In the latter two cases, the supremacy of social investment was driven by the need of legitimacy in public opinion and of the international consensus. So that, we can include in the strategy of catching-up the interest of the policy components to their survival and the maintenance of the power. In this regard, in the scheme proposed we observe as a strategy of economic catching-up, based on internal legitimacy and international competition, which leads to incomplete results in the defense of human rights of the second generation. As we have previously argued, the authoritarian regimes that have shaped much of the institutional life of the EADS have succeeded in filling the void of popular political legitimacy through the achievement of non-negligible economic results. But the Korean experience teaches that the same result in terms of legitimacy is achieved even through the provision of new social services to the workforce. This is the pattern of the so-called *participatory welfare initiative*¹ proposed by Roh Moo-Hyum in South

¹ While *productive welfare* focused more on decreasing absolute poverty and unemployment in the wake of the Asian financial crisis of 1997, the *participatory welfare* had an effect mainly on the relative poverty, social polarization and segregation (Lee *et al.* 2014).

Korea. In this country, the welfare state system is not connected to social rights but is a function of the opportunity to guarantee the widest possible access to work. The *participatory welfare* shows that mechanisms related to internal legitimation and external integration always remain mutually reliant. In the matter of the particular case of Taiwan, social spending has increased dramatically in 1993 and had the aim to contribute to the internal legitimation rather than to the international competition of the country. The Kuomintang regime, from 1945 to 1987, created a model that we can define as *selective welfare state*, a welfare system designed to selected groups of users potentially useful for the maintenance of power such as civil servants, teachers, block officers, etc. (Aspalter 2002, 2010). In Hong Kong, high investments in the social field, starting from 1990, preceded the main objective of the economic policy-oriented to productivism and, therefore, the economic growth. This strategy has stopped social unrest and strengthened the loyalty of the new immigrants from China. The analysis by Christian Aspalter suggests an overall framework in which investments in social policies by EADS are positively correlated to the political needs: solving problems of internal legitimacy and win the elections (Aspalter 2006). The search for legitimacy leads to a partial perception of the second generation of human rights. As in a mirror, even the same protection of these rights is partial and, in some cases, typically selective. Obviously, there are also cases in which pressures and influences of legitimacy and competition appear simultaneously. The aforementioned social investments in Hong Kong have been instrumental to excel in economic competition and migration with the communist Chinese mainland. The Central Provident Fund in Singapore among other effects increased the loyalty of the people to the state, but also increased the attractiveness and competitiveness of the domestic economy (Aspalter 2006). In the same way no wonder the concept of *productive welfare* ascribed to Roh Moo-Hyum's predecessor, Kim Dae Jung. The purpose of the Korean welfare system was, in fact, to ensure the highest use of the potential workforce. Holliday defined as *productivist* the welfare regime of EADS, describing a type of welfare state subordinated to economic growth dynamics and to development of the productive human capital (Holliday 2000). As noted by Gough, the concentration of investments in education and healthcare is "[...] part of a strategy of nation building, legitimisation and productive investment" (Gough 2002, p. 58). Japan, the less authoritarian country among the state-led development experiences in East Asia in the Twentieth

Century, consistently with the idea of *state development capitalism* had subordinated investments in health, education and social protection with the objective of economic growth (Shiratori 1983). As evidenced by Wilding social interventions took the form of regulation rather than delivery of social services (Wilding 2000). Japanese social rights were secured only to the extent that did not affect economic growth, replacing the direct provision of social services with their simple regulation and, in so doing, effectively making social rights instrumental to economic growth. The analysis by Aspalter concludes that social rights in force within the legal systems of the EADS are targeted primarily to the economic participation dynamics and the strengthening of the development relevance of the production-oriented education system. This is achieved through a number of investments mainly focused on healthcare, education, housing and less on traditional interventions on social security (the latter, however, oriented towards the increase of employment) (Aspalter 2006). If, according to Aspalter, this leads to an example of a combination of economic and social development, the perspective of integral human development highlights the many critical points of the social policy of the old model of DS. To achieve a rapid industrialization of *labour-intensive* type, the typical model of DS provides specific investments in education and training of specialized fields. In this sense, such investments are directly relevant to industrial production requirements, which replace *de facto* those general of the state. Ashton *et al.* (1999) stressed the important link between industrial and educational policies. In particular, the strong centralized control, typical of the authoritarian state, ensures that the sector of education and training can effectively respond to the requirements of the production system. The case of education is emblematic. To enhance our analysis we employ, with appropriate adaptations, the model of knowledge economy proposed by Gary Becker's seminal work (1964), in which he drew a crucial distinction between general and specific skills¹. The entrepreneurial mindset and attitude of DS means that its behaviour towards investments on knowledge is similar to that of a private investor. It clearly appears that the perception of the development by the DS leads to under-investment in the production of general knowledge, as it would be not accessible, functioning and usable in the short term within an industrial

¹ This opens the way for a further discussion on the importance of labour market institutions, their effects on the structure of wages, and how they affect human capital investments.

manufacturing process. This allows the DS to move, at least formally, to the technological edge achieved by Western countries (Gerschenkron 1960, 1962). The importance of general knowledge for the formulation of policies, which address DS national needs while taking into account both the constraints and the resources of the national economy, had already been identified by Johnson in his study on the Japanese miracle (Johnson 1982). Then again, the DS cannot fully cope with the uncertainties of the future because it is lacking of general knowledge necessary to be able to read and understand, among other things, the social and economic phenomena. This is due also to the absence of venture capital activities which, by preventing the necessary native experimentations, slows the appearance of autochthonous innovations (Fong 1998). Accordingly, the scheme of perception proposed sums up the equilibria of a form of *social compact* between state and citizens which rests on the basis of internal legitimacy and international competition. In this regard, the temporal paradox and the relationship perception-protection emerge as essential building-blocks of the main relationship DS-HR. Not surprisingly, the model of the old DS has proved to be unsustainable in the long term (Edigheji 2010). At the same time, the scope of the *social compact*, briefly described just above, has proved inadequate in those countries with the most successful industrial and economic development potential as South Korea (Gumede 2009), that is to say, expanding the reach of civil and political rights, with their formal and substantive scope of application, as well as investments for social policies. We wonder now if a democratic developmental state can overcome the potential contradictory nature of goals such as autonomy and control on the one hand, growth and redistribution on the other hand (White 1988). More than anything, we wonder as the human development approach (Sen 1999b) can solve the paradox of DS and if the concept of integral human development (Sen 1999a) can let DS to go beyond its limits and surmount the problems associated with the perception and decision depicted above.

Table 2. Scheme of the perception DS-HR: the scope of the *social compact*.

Relationship DS-HR	Macro-level category of rights	Government's perception
	enforceable rights	(1a) internal viewpoint constraining effects on HR
		(1b) external viewpoint negative effects on HR
	claimable rights	(2a) domestic legitimacy: partial protection of HR
		(2b) international competition: instrumental pursuit of HR

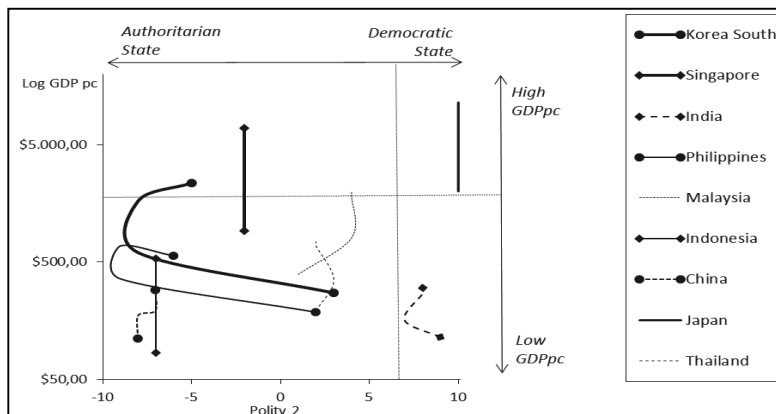
Source: our own elaboration.

Legend: DS stands for Developmental State; HR stands for Human Rights.

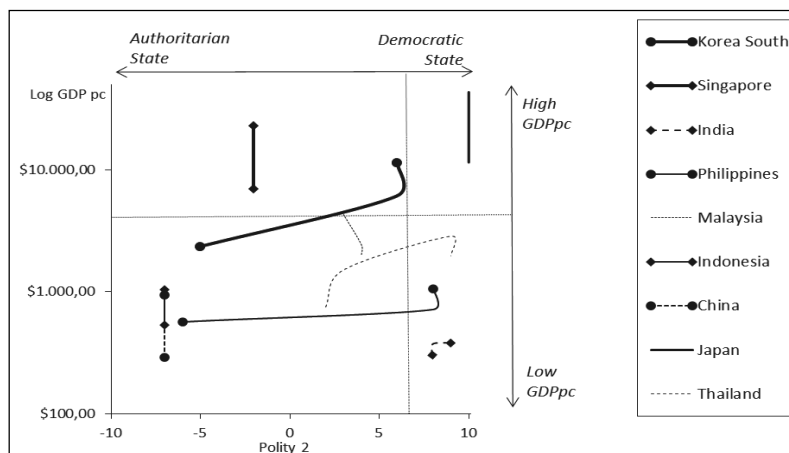
The remarks on social and economic characters of the old model of DS are confirmed by historical data concerning a group of South-East Asian countries. Our methodology allows us to structure a graphical analysis through which we compare a number of political and economic results in a time span of 30 years. We choose to compare a proxy of human rights of the first generation, specifically the political rights, with the GDP *per capita*. The following two graphics processing (Figure 1 and 2) were obtained comparing Polity 2 Index and GDP *per capita* on the basis of data coming from quinquennial surveys. We use Polity 2 Index as an assessment of democratic governments and their procedures to recruit components for constitutional bodies and institutions in general: 1) regulation of chief executives recruitment; 2) competitiveness of executives recruitment; 3) openness of executives recruitment (Marshall 2013; Marshall and Cole 2014). We represent GDP *per capita* by relating to a logarithmic transformation on The World Bank national account data (2014), in order to underline the dynamics of those countries with low GDP *per capita*. The two figures (1 and 2) can ideally be divided into four areas: the up-left area with values of Polity 2 Index lower than 7, which is characteristic of the authoritarian model of DS. The up-right area, with values of Polity 2 Index higher than 7, is characteristic of the democratic model of DS. Similarly, the low-right area is characteristic of the authoritarian states with low-

income and the low-left area is typical of democratic low-income countries. More in detail, Figure 1 refers to the period 1970-1985 and describes the authoritarian turning point of some countries of the East Asian region. In particular, Figure 1 shows the authoritarian turn carried out by South Korea and its first surprising results. Japan, characterized by a Polity 2 Index equal to 10, is the country with the best performance over the period. Figure 2 refers to the period 1985-2000 and shows the political transformation of the countries of the considered system towards less authoritarian models. The most significant change is linked to the performance of South Korea which reaches a Polity 2 Index close to 7. As well as for Figure 1, Japan is the country with the best performance over the new period considered. Among the other countries surveyed, we can observe the performances related to Malaysia and the Philippines: as is well known, the two countries have had a strong democratic thrust during the second period under consideration, similar to that of South Korea, but no results equal the Koreans. Indonesia, characterized by a very low value of the Polity 2 Index, reaches very modest results in both periods. The results of the nearby Singapore are an exception related to the peculiarities of that city-state: Singapore, in fact, was able to support a reduced level of political freedom, characterized by a Polity 2 index consistently negative, with an increasing openness to international trade of its economy.

Figure 1. EADS's economic growth and democracy (1970-1985)



Source: our own elaboration on data Polity 2 (Marshall 2013; Marshall and Cole 2014) and GDP per capita current US\$ (The World Bank national account data 2014).

Figure 2. EADS's economic growth and democracy (1985-2000)

Source: our own elaboration on data Polity 2 (Marshall 2013; Marshall and Cole 2014) and GDP per capita current US\$ (The World Bank national account data 2014).

4. The new model of DS and human development

The above results and related considerations points to one direction: the rethinking and reconstruction of developmental state. This new model of DS takes the goals of long-term economic growth and structural transformation of the economy and engages the institutional innovation to achieve those goals (Chang 2010; Edigheji 2010). In this section, we follow the transition from the old model of DS to the new one as suggested in the literature. More specifically, we focus on the issue of democratic DS and, in doing so, we adopt the scheme of perception proposed previously to the new model. The analysis will draw indications on the positive changes introduced by the model of DDS and the risks that may arise. At this point, we have to consider the perspective nature of the model. In fact, the DDS has been thought to be adopted as a model for developing countries. Given the prospective basis, it is appropriate to introduce a new framework of analysis to refer to. Indeed, the scenario in which EADSs have developed is unique and new developmental states, also for their nature of DDS, will have to face

an unprecedented global scenario. The results achieved will then be generalized to be used in the analysis of developing countries aspiring DS and not. In the framework of the new social agenda, one of the greatest dares in development policies is the edification of a state that can coincidentally promote three orders of dimensions for all its citizens: to facilitate economic growth and structural transformation, to derive its legitimacy through popular participation and electoral process, and to pursue social policies ensuring equitable entitlements (Mkandawire 2001). The developmental dimension, the democratic one and that of social inclusion are required in order to ensure adequate capacities and functionings for all citizens. These three dimensions (and related concerns) are vividly specified by Amartya Sen in one of his seminal works titled *Development as freedom* (Sen 1999). Development economics tended to express little or no concern in democratization issues. Indeed, some scholars explicitly advocated for authoritarian legal systems. According to Mkandawire, “*the widespread view was that development was the steep ascent that needed tough measures, which would be unpopular and therefore unlikely to be pursued by democratic rule. This authoritarian streak of development thinking has been used as an argument against developmentalism, which was seen as sacrificing many other values in the name of development. Both the current normative discourse and its insistence on human rights, and the emergent political arrangements, demand that the new development economics relate to the issue of democratization directly rather than merely as a constraint*” (Mkandawire 2001, pp. 8-9).

Democratic Developmental State (DDS)

The fact that nowadays it is not conceivable other form of DS beyond the democratic one is definitely a fruit of the human right approach to development (Hamm 2001) and the human development paradigm (Sen 1999a). In particular, the capabilities approach (Sen 1999b) is become the main alternative to the previously socio-economic development framework and has dismissed other methodologies based on income and assumed maximization of utility (Laderchi et al. 2003). The developmentalism, that is at the base of the old model of DS, is a political and socio-economic system which tends to limit parliamentary democracy (Murakami 1992). Today,

however, in accordance with the institutionalist theories and with the theory of human development, the foundational base of the development of a country consists of a typical democratic structure (Hoff and Stiglitz 2000; Rodrik 2000). The fact that the democratic structure forms the basis of development is not a mantra derived in such a sentimentalist way from the thesis of development as freedom. In fact, the new model of DS supersedes the pursuit of economic catching-up with the pursuit of human development. In this manner, it has to face a complex target whereby it is necessary to aggregate different preferences. Democracy is the only “rational choice” to attain a shared order of such preferences (Sen 1999b). Hence, if the dynamics of development are connected to the well-being of individuals and to the expansion of their capabilities it cannot be driven by technocrats, but must descend from a deliberative democracy (Evans 2010). However, the DDS still remains tied to a form of state known as developmentalism. The DDS is defined as a form of state which can act with authority, credibility and legitimacy in a binding manner in order to formulate and implement mainly its economic policy (Edigheji 2005). According to Edigheji (2010), the DDS goes through the ideological orientation and the institutional design. Given the emphasis of DS literature on the topic of institutions, it is worth recalling in this context the definition of democracy as meta-institution from a developmental perspective: participatory political institutions are meta-institutions that help to promote and build appropriately other norms and participatory political institutions since they aim at aggregating and consolidating locally specific knowledge in order to make the civil society work (Rodrik 1999, 2009). According to Rodrik, in fact, economic growth and development require dependable institutions to process and gather the so-called local knowledge and only democratic institutions succeed in this respect. The role of local knowledge plays, in reality, a central role in the search for information as complete as possible. In fact, to have accurate information constitutes a key element for an efficient economic strategy. For this reason, Evans speaks of deliberative development at the base of the model of DS for the Twenty-First Century (Evans 2004). Evans synthesizes the three main areas of development studies - new growth theory, institutionalist approach and the capability approach - in the formulation of objective model DDS: enhancing human capabilities (Evans 2010). Peter Evans, in the framework of international political

economy research literature, has the merit of having recognized with equal dignity the two roles of the DDS: on the one hand, to guarantee the distribution of basic rights and on the other hand to ensure the provision of social services (Evans 2010), although the scholar of Berkeley focuses his attention mainly on the second role. Upon closer inspection, these two roles correspond to the two categories of human rights previously considered. As we discussed, the DS literature has focused a lot of interest on the objective of the expansion of capabilities through the provision of collective goods. Although that provision can be anchored to an operational and functional democratic structure, the human development approach considers the participation in a democratic life as one of the possible capabilities of the individual. Therefore, this introduces a tautological risk which is exactly the partial consideration given to political rights as capabilities. To remedy this problem, we chose to use the scheme of perception of human rights. This scheme is briefly applied to the model of the DDS. A democratic developmental state, although it incorporates the democratic nature in his own denomination, there again can have a more or less democratic character. States, indeed, may need to manage the condition of state with no choice or tropical democracy (Mkandawire 2010). In the first case, because of possible interferences in the internal affairs by international politics, often by donor countries, democratic states see decreased or even cancelled their sovereignty. In the second case, the states can have democratic institutions without real democratic dynamics, that is, being reduced in the condition of formal democracies. Thus, if we consider the DDS as a model for aspiring DS, one cannot underestimate this latter aspect. The perception by the DDS of human rights of the first generation therefore depends on the effectiveness of internal democratic processes. In a DDS, the intrinsic vision of this category of human rights is one with the domestic institutional framework. The democratic nature is also linked to the pursuit of human development because it is based on the constitutive role of freedom and on the role, instrumental, of political freedom. Beyond this conceptual aspect, empirical evidence shows that the guarantee of basic rights, especially property rights, is able to better mobilize individual resources helpful to increasing capabilities of people (Evans 2010). The extrinsic vision of the rights of the first generation is connected with the perception of the state within the entire system of the international protection of human rights. Here we merely note

that the role of the international community means that human rights are seen as a key enabler of the DDS. The potential DDS, in fact, appears in the eyes of the international community burdened with numerous prejudices. These prejudices exist, by the way, also in the literature as to its status: the level of democracy and political freedom concur to establish an accreditation mechanism in the face of the international community which still associate with the policy of DS its past violation of human rights (Mkandawire 2001). The second generation of human rights fits neatly into what the literature has defined as the role of social policy in the DDS: production and reproduction of human capital. In this regard, it is worth highlighting the complementarity found between the two categories of rights. Indeed, the democratic nature of the institutions helps to define more accurately the levels of production of those utility services and installations related to social rights. In this sense, the presence of a democratic structure contributes to an optimal perception of such rights (Sen 1999a). However, the problem of legitimacy that existed in the old model of DS can be transposed here in terms of electoral support. In fact, even the governmental components can yield to those political pressures which favour the industrial sector than the other, using only instrumental forms of welfare state systems, but then preferring visions of more universalistic welfare at election time (Aspalter 2006). Hence, we can analyze the model of the DDS from the conceptual standpoint through the “perception scheme” previously proposed. Table 3 shows an overall picture of the relationship between DDS and human rights. As for the old model of DS, here we point out each category of rights with its mode of perception within the policy-making process. In particular, for the first generation of human rights we take into account both the internal viewpoint, that is the relationship between claimable rights and the internal objective of human development (1a) and the external viewpoint, that is the relationship between claimable rights and international connections of the DDS (1b). Afterward, for the second generation of human rights we look both at the perception from the domestic point of view, that is the democratic political process (2a) and at the perception from the external point of view, that is the consensus (2b). From the government’s external viewpoint, the protection of these rights represents a qualifying element in front of the international community. Instead, from the government’s internal viewpoint the protection of human rights runs the risk of being linked to popular

consensus, that is to be a function of electoral cycles. Therefore, these rights are promoted at certain times and still neglected at other times.

Table 3. Scheme of the perception DDS-HR.

Relationship DDS-HR	<i>Macro-level category of rights</i>	<i>Government's perception</i>
	enforceable rights	(1a) internal viewpoint institutional protection of HR
		(2a) external viewpoint qualifying protection of HR
	claimable rights	(1b) democracy optimal protection of HR
		(2b) consensus partial pursuit of HR

Source: our own elaboration.

Legend: DDS stands for Democratic Developmental State; HR stands for Human Rights.

Taking into account this result, we can introduce a kind of political-economic analysis of the sustainability of the DDS. Therefore, we will consider 1) the complementary aspect of human rights, 2) the relationship with the investment, 3) the correlation democracy / growth and the dynamics of regionalism. The key characteristics of a developmental public service and administration appropriate for a DDS are that such administration must be capable of successfully carrying out the mandate of a DS, i.e. to implement developmental policies that significantly reduce poverty and unemployment, as well as social inequalities (Maphunye 2009). However, the very term human developmental state, here reaffirmed even as part of the title of this work, may become significant as a neologism according to this strand of economic literature: “*what would a ‘human developmental state’ look like, other than the historically contingent result of a long process of social ferment in which workers, farmers, women, minorities, the poor, environmentalists, etc. struggle to advance their interests? [...] Moreover, given the small likelihood that such a change would occur in an entirely top-down manner, the emergence of a human developmental state would require*

the opening up of the political system to provide channels through which interests and demands can be forcefully expressed and have some hope of changing policies.” (Riskin 2007a, pp. 20, 23). Hence, we suggest the reproposal of the new locution by broadening the developmental state concept up to involve the integral approach to human development.

Economic and political sustainability

In the case of DS, the production of general knowledge proves to be underestimated because of the predominant, if not exclusive, focusing on the development based on the industrial sector. In DDS, on the contrary, economic growth and social policies have to be pursued jointly and harmoniously as possible: in the context of the DDS, any policy that expands the capability set represents a growth policy (Evans 2010). To this must be added that the services at the base of the second generation of human rights are coproduced by their recipients. More precisely, the state must take action to provide such rights, but also the individuals and the communities to which they belong must work actively for the effective activation of them (Ostrom 1996). At the same time, the protection of civil rights goes through the best available knowledge that increases overall productivity without degrading the legal protection of workers (Mkandawire 2010). Just here, investments in knowledge, freed from the instrumentality of the economic catching-up, represent a new opportunity for the DDS to survive in the global competition once the technological frontier is reached. Surely, the civil society is a “complicated beast” to untangle, with its many facets and conflicting interests, but inserted in a democratic context it is able to guarantee greater stability than can be achieved by an authoritarian regime permeated by movements of social struggle that seek to capture broader spaces of autonomy: the troubled history of the republics that have been established in South Korea over time is an example. A stable political environment and open to the external world is capable of attracting foreign investments more than a relatively closed and unstable environment can accomplish. The fact of being open to the external world allows to come into contact more easily with new ideas, innovations and essential services to compete in the so-called vertical technological development, in which the intermediate technologies play a key role (Segerston, Anant and Dinopoulos 1990). This

means to actively participate in the process of creative destruction indicated by Joseph Schumpeter (1939). As stated by Huang, considering the possibility of a “next Asian miracle”, economies grew vigorously at greater relative openness and more listlessly during politically prohibitive phases, referring in particular to the experience of India and China (Huang 2008). It is a political outcome that a democratic government can better pursue than an authoritarian one. The theme of the openness and isolation is central to the history of EADS. Some authors have focused their studies on the isolated character of public institutions, such as ministries and government agencies in supporting industrialization, and they have investigated them, as we have seen, in terms of autonomy and structural power. However, EADS have benefited from a number of privileges associated with their geopolitical condition. The EADS were experiences of territories characterized by the presence of a neighbouring or hostile country with easy access to maritime trade routes. This facilitated the development of international trade and resulted in a lack of attention to the aspects of regional policy. In addition, the rising international equilibrium created under the aegis of the United Nations and the World Trade Organization has ensured to EADS a development essentially free from any influence of supranational regulations. All this renders the old model of DS an unrepeatable unicum (Evans 2010). The aspiring contemporaries developmental states, especially on the African continent, are included in more complex regional contexts and are subject to a larger number of international restrictions than in the past. All these features must be involved in the project and implementation of the DDS, not only from a conceptual point of view, but also from a political and economic feasibility viewpoint. We can recap this order of issues in the category of regional problems. The forms of nationalism definitely constituted the main strength for EADSs and even today some scholars argue that for the aspiring DDS nationalism constitutes the primary resource for a variety of political and economic factors because it would 1) allow a nation-building process, 2) strengthen social cohesion, and 3) make available investments otherwise impossible to afford for an exclusively market-based economy as they can justify massive public investments in infrastructure assets. In the past, forms of regional cooperation among Asian countries were prevented by a succession of competing unstable regimes. The possibility of democratic debate and accountability, and the associated

opportunity to develop parliamentary institutions, not only allows that type of cooperation, but also enables to shift a portion of the legislative sovereignty to a supranational level. This permits to introduce the concept referred to as developmental regionalism (Nesadurai 2003; Mkandawire 2010; Dent and Richter 2011). This concept is even more significant if we consider continental type regions with frequent migratory movements, extremely wide boundaries uncontrollable capillary. In addition, the so-called regional road to development is arguably the most promising way out of the known legislative competition which threatens to undermine the legal protection of the individual even in those regions typically characterized by democratic governments. In the current globalized context, in fact, the development is no longer a national goal, but become a full objective of the regional level. In this sense, we can reread even the concept of integrality described at the beginning of this work: the development is never for a single person since it has to promote the good of the whole humankind and, thereby, it must be the most widespread and complete for each single human beings. Although regions and countries are not close to being interchangeable concepts, empirical data in an open-economy version of the Neoclassical setting confirms that the convergence of growth rate does appear focusing on more homogeneous groups of economies such as the U.S. states, Japanese prefectures and several European countries and generally in those regions with spatial interactions, such as trade relations and factors mobility, that gradually reduces an original misallocation of resources (among others, see Barro and Sala-i-Martin 1991, 1992a, 1992b, 1995). Furthermore, the correlation between economic growth and democracy has been proven by Lipset (1959). More recently, Almond (1991) updates the results previously obtained by Lipset. Despite this, the correlation cannot be taken as a support of the thesis “development first, democracy later”, as does Lipset, for the reasons stated in the first section of this work. Not necessarily economic growth dynamics lead to democracy (De Mesquita and Downs 2005) and it is not surprising, given our analysis, that the push for democratization has been related with the power of social classes advantaged from the development (Rueschmeyer, Stephens and Stephens 1992). As mentioned earlier, the endogenous growth theory has represented, and partly still represents, the main paradigm for the analysis of the development. From such theory have emerged various empirical studies

on the relationship between economic growth and government policy. Mkandawire summarizes the existing studies in the following analytical formulation, which is a vectors function:

$$\dot{Y} = b_i I + b_m M + b_z Z \quad (1)$$

where \dot{Y} is the growth rate of GDP and I , M and Z are vectors, respectively, of the initial conditions, economic policy instruments and state conditions or information; b_i , b_m and b_z are parameters that are used as weighting factors (Mkandawire 2001). He criticizes the results achieved through this kind of studies due to the excessive discretion in the choice of variables. Tests on the government policy are, in fact, all extremely fragile or do not contain enough information to be evaluated (Barros 1993). After all, the empirical results on the level of economic openness confirms the analysis formerly carried out on the DDS. In particular, it confirmed the existence of a positive and statistically robust relationship between the growth of GDP and opening-up measures such as import and export (Levine and Renelt 1992), and changes in trade shares (Helliwell and Chung 1990). Nevertheless, the growth of GDP cannot completely indicate the type of development that we have described so far. Not even the Human Development Index (HDI) succeeds in this type of effort and the fact that the GDP represents, all in all, a fairly good proxy of the HDI emphasizes its relative limited analytical power. The concept of human development to which we look is defined through the consideration of human rights enforceable and claimable. This is, namely, a consideration of the fullest possible that concerns the individual capabilities. The extent of this type of development cannot be separated from the level of protection of civil and political rights along with the analysis of the economic and social conditions. Such an extent should prevent paradoxical results as sometimes happens with the use of HDI. There are countries that had high rates of economic growth and a rapid increase in the value of HDI and experienced, at the same time, massive human rights violations and repression of political rights. This was the case in Indonesia which was recognized as one of the most successful economies belonging to the well-known “Asian miracle” (Emmerson 1999). The results coming from the old and new model of developmental state can be generalized through two approaches: the measurement of integral human development and the

updating of policy indicators. The first approach requires formulating an index of integral human development that takes into account both the political conditions, the exercise of civil rights and freedom inside of a country, and both the social conditions already measured by the HDI: for example, the Better Life Index by OECD. At this point, a first issue is how much weight to assign to the component of the rights of the first generation and how much to that of the second generation. The estimation of the weighting factors should be determined on the basis of the classification of the human rights into the first and second generation. On this regard, we can employ the perception held by individuals of a country, for instance, in examining the migratory movements within a single region. A second issue follows from the existence of migratory movements among countries whose human development indices have the same value. Is the search for a job or freedom that move people? The second approach amounts to the update of tests carried out on the government policy. Currently the main studies have concentrated on the levels of consumption, investment, public spending, taxation, inflation and the like. At this instance, the focus must be on indicators of political freedom, democratic participation and deliberative capacity as the level of freedom of thought and speech, the percentage of potential voters, the level of press freedom, the level of social mobility, the cost of policies and alike. These tests can so assume a formulation such as the following:

$$\dot{Y} = f(I, A, Z) \quad (2)$$

which is a vectors function, where \dot{Y} is the growth rate of GDP as a function of vectors I , A and Z , respectively of the initial conditions, the indicators of democracy (in replacing of the economic policy instruments), and conditioning information. The (2) has the same shape of the (1) proposed by Mkandawire, in which the economic results are replaced with the level of human rights of the first generation.

5. Concluding remarks and implications for the economic theory

The relationship between economic development and democratic organization of the state has been a recurrent question for scholars as well as

policy makers, and has centered on whether both can be consolidated simultaneously. In recent times, has there been a renewed interest in the idea of developmental state or developmentalism in some countries of the world, such as in several African and Latin American countries. Further research into the acute onset of the global development crisis is needed to understand if this is somewhat a reaction both to the issues raised in the wake of the current economic and financial crisis, in thinking about the socio-economic functions of the state, and both to the failure of the drastic pro-market reforms under the Washington Consensus in order to provide socio-economic progress and stability. In this regard, the persistence of very large areas of poverty and deprivation proves that maybe we need to rethink of what we mean by development and its stakeholders, and the economic theory behind it. As stated by Selwyn (2014) *“the central paradox of the contemporary world is the simultaneous presence of wealth on an unprecedented scale, and mass poverty. Liberal ideology and practice, as propounded by International Financial Institutions (IFIs) and heads of transnational corporation, state leaders and their intellectual supporters explain the relationship between capitalism and poverty as one based around the dichotomy of inclusion (into capitalism) vs exclusion (from capitalism).”* (Selwyn 2014, p. 1). Neoliberal thought characterizes the contemporary ideological argument of capitalism, where markets are said to operate optimally when they are freed from the state and other forms of non-market mechanisms. Neoliberal recommendations, such as trade liberalization and the deregulation of markets (in particular financial, commodity and labour markets), would be designed to prevent state intervention and to support market-led development, thus to enable developing countries to exploit the dynamism of the market. Conversely, one of the main problems, and most well documented, with the Neoliberal argument is that of *market failures*. This refers to what is known in economic literature as the *second-best theorem* (Lipsey and Lancaster 1956, 1957) from which it follows that removing state intervention and liberalizing markets do not necessarily guarantee higher allocative efficiency. Indeed, there is no economic theory which states that achieving higher static efficiency will inevitably lead to higher dynamic efficiency (among others, see Krueger 1980; Chang 1993, 2003; Taylor 1993). To be more mindful, so far as a total liberalization is not possible, there is no certainty that a partial

liberalization will bring about an improvement even of the static allocative efficiency of the economic system. For that reason, undoubtedly, there exist areas in which the market mechanism does not work. How does emerge, thus, the idea of state-led development? According to Erik Reinert (2007, 2010), the core idea behind developmentalism is that the productive structure of a nation may be suboptimal and, therefore, enhanced with the support of an active economic policy. The concept is based on a notion that some economic sectors are more conducive to growth than others. In contrast, the current prevailing Neoclassical economic theory is essentially based on David Ricardo's idea of comparative advantage as the source of specialization and wealth creation from international trade. On one side, with the so-called factor-price equalization, standard economic theory continues to set the international trade as a key element for the convergence of income levels between the poor and rich countries. On the other side, developmentalism intuitively conceives that integrating countries with prehistoric technologies with other countries with advanced knowledge and high-technologies will lead the first countries specializing in being poor and the other countries specializing in getting rich. Moreover, undeniably, for many years it became fashionable and attractive to maintain that markets are better mechanisms for resources allocation than the states. Many scholars have looked towards East Asian experiences, where governments have played a leading role in strengthening economic growth and providing a renewed foundation for socio-economic outcomes and other socially related matters (Chang 2008; Turok 2008; Gumede 2009). For that reason, the alternative approach beyond Washington Consensus has to overcome a very critical weakness of the Neoliberal paradigm, that is to say its reluctance to acknowledge that contemporary economies cannot be sustained merely by an arms' length market relationship but that they require a rather complex institutional framework and investing in institution building (Coase 1992). In fact, when they come to practical policy suggestions, Neoliberal recommendations to developing countries are ultimately based both on the search for competitiveness such as destruction of institutional capacity, reducing wages, trimming social contributions, cutting taxes to win market shares, open the financial system to the global market with minimal regulation over capital flows, and more in general on the fact that developing countries should relate to Anglo-Saxon economic institutions characterized

by arms' length relationships between contracting parties. In the last two decades, however, theoretical and empirical developments mainly in the field of institutional economics on different OECD economies have revealed that the Anglo-Saxon institutional pattern is not the only practicable approach of organizing a capitalist economy (among others, see Chang and Kozul-Wright 1994). This issue can be explored also from a perspective by which it would be possible to conduct a system-wide analysis, in view of the wide variety of factors that affect the strength and stability of an economic system (Ocampo and Stiglitz 2009). These factors range from the position in the global economic system, the production and trade pattern, the financial structure and how it can constrain the macroeconomic policy space and inhibit social inclusion. In this regard, despite the negligible achievements by mainstream Neoclassical viewpoint on policy-making in the developing world and the growing heterodox research undertaken, the aforementioned complex institutional framework still remains conceptually under-theorized both with regard to the analysis and policy alternatives. Certainly, in addition to the concern for institution building and social aspects of development, the insights of human rights in the socio-economic policy-making process become a key concept. With regard to this concept, one of the eight main stylized facts observed by Ocampo, Rada and Taylor (2009) in their empirical analysis on growth and policy in developing economies is particularly concerned precisely with both the role of the state, since the success in developing countries is associated with states as much as markets, and the policy space. One of the most awkward aspects of the more liberalized international and domestic environments that has predominated in recent decades is that the policy space of developing countries has drastically restricted. For all that, therefore, requires investing in institution building and, most importantly, promoting national capacity-building for a long term. The explosion of the "informal sector" along with the dismantlement of the institutional framework have resulted in a new empirical relationship in developing countries: economies with large informal sector grow more slowly than those with strong institutional capability and small informal sector. Indeed, Neoclassical analyses regularly points towards an inconsistent implementation mode of the fundamental subject of institution building. In fact, mainstream typically assumes that creating efficient monetary or tax authorities is within range of developing countries, but that

promotion of productive sector development is somehow unfeasible. There is no reason why and it might not seem so fair not only for the reason that there is no evidence to support this contradictory view but mainly because successful countries have shown that it can be done. In tracing this path, economic theory has played an even more important role by confusing the reference framework for policy makers and, more generally, to public opinion and by producing what, put to the test, proved to be a distortion in the perception of potential relationships of cause and effect. It is essential to stress here that there is not one economic theory, but many approaches to it, with different methods and languages used. It is the particular domain of social phenomena that characterizes every socio-economic structure to ensure that the success of a particular structure or a group of them is dependent not by the best interpretive capacity, as happens for the so-called hard sciences, but above all by historical reasons linked to the role of legitimation of the power-control of the structures themselves. Thus, it would be much more appropriate and effective to adopt the idea of Kuhn's normal science, which has very little of "heroic", looking at coexistence of the theoretical approaches rather than a single absolute truth theory (so much as contradicted by empirical evidence), and begin to use in economic studies its notation of prevailing paradigm as a set of theories, also significantly different from one another but linked by some element of homogeneity they have in common, making them the most widely accepted explanation of a specific domain of phenomena in a particular historical moment. We believe that economic analysis cannot propose normative solutions by deriving them from a selection of alternatives that it is defined as scientific just because it follows the hypothetical "natural" laws. Economic analysis can only structure information in order to support the process of decision-making on which is based the operational reality. In this sense, economic analysis cannot impose standardized way of life and behaviors to individuals and countries, but it can provide a range of guidance and guidelines to policy makers with a key focus on institutional solutions. It should respect the behavior of free individuals to pursue and achieve their personal and collective objectives, even though constantly changing and ontologically discretionary. In this perspective, theory and historical time teach us on the one hand that the only intermediate dimension between the individual economic agent and the wider economy, which may become binding, is that

of the state in the modern sense. On the other hand, theory and historical time teach us that to make effective the liberal revolution begun with the British moral philosophers in the Seventeenth Century and not to fall back into locked medieval social structures, articulated in a waterproof castes, the state should have an appropriate dimension to ensure the sustainability of its socio-economic system in the long run, but not so large as to encourage attempts to impose on other states rules of conduct or even aggression outward. Indeed, what we suggest as the central functions of developmental state involves coordination for large-scale changes, institution building, provision of entrepreneurial vision and, most importantly, the implementation of the human rights framework, which, with possible exceptions, cannot be easily adapted within the narrow confines of mainstream economics. Formerly, the concept of developmental state was developed in order to explain the East Asian countries catching-up experiences of the second half of the Twentieth Century. The purpose for such a concept lies in the fact that the Asian model was neither the soviet economy nor the free-market model or the unanswerable Neoliberal Western capitalism (Johnson 1999). The idea of a developmental state was a way of drawing attention to this hybrid model, which consisted on a combination of state planning with market dynamics. The concept was introduced by Chalmers Johnson in his seminal work of 1982 about Japan, which was followed by other studies with the same perspective as the contributions by Alice Amsden on Korea (1989) and Robert Wade on Taiwan (1993). According to Johnson (1999), the developmental state “[...] exists as an abstract generalization about the essence of the East Asian examples”, so that “it is both particular and generalizable” (Johnson 1999, p. 43). In this sense, fundamental attempts to generalize the essence of a developmental state paradigm and to propose different criteria to classify a state as developmental were made principally by Ha-Joon Chang (1999, 2003) and Peter Evans (2004). According to Barro and Sala-i-Martin (1991), although several economic models predict convergence, the empirical evidence has been a very critical subject of debate. More in general, the economic mainstream literature on catching-up and convergence of growth rates states that, due to international knowledge spill-overs, international growth rate differentials tend to disappear over time. Nevertheless, the most influential empirical research indicates that such catching-up tendency is partly

grounded on the group of now-industrialized economies, and does not hold between developed and less developed socio-economic systems. As confirmation of this, the impressive work of empirical research carried out by Ocampo-Rada-Taylor shows as the primary stylized fact that “[...] *convergence in income levels among countries is the exception rather than the rule. Indeed, divergent economic performance has been the major characteristic of the evolution of the income per capita between industrial and developing countries over the past two centuries.*” (Ocampo, Rada and Taylor 2009, pp. 142-143) in stark contrast to the mainstream interpretation of economic growth and development and the policy recommendations associated with it. Definitely, among the main catch-up theories, a number of studies reveal that there is a limit for catching-up essentially due to the inability of a backward country to increase modernization processes to lines of output where specific human capital skills and behaviours are required (already more than fifty years ago, see Gerschenkron 1962, although not strictly interested in economic growth, but in the process of late industrialization). Here it is assumed that, contrary to what is implicitly assumed in the catching-up standard economic literature, technology spillovers do not arise automatically, since a country must be endowed with particular learning capabilities in order to be able to integrate and apply technologies conceived elsewhere in its own economic system. These learning capabilities depend on such variables as the education of the labour force, the quality of the infrastructures, the technological distance and, last but not least, the existing system of human rights and its operational functioning. With regard to the development process, dynamics between market, forces of innovation and productive sectors can generate virtuous circles of economic growth and development based on decreasing costs per unit output. Nevertheless, Adam Smith recognized but did not emphasize that the invisible hand may necessitate support in triggering and advancing of such virtuous circles and their sustainability (Ocampo, Rada and Taylor 2009). A few years later than Smith, other academics and scholars as Alexander Hamilton, Friedrich List and Daniel Raymond explicitly paid attention to the conscious actions, paraphrasing the visible hand, of the policy maker that is often required in order to stimulate those sectors with increasing returns while shifting resources from elsewhere in the economic system (among others, see Maddison 1991; Freeman 1995; Chang 2002b;

Acemoglu and Robinson 2005). The so-called industrialized economies succeeded at this task, so the question is how to design policies that will make similar possible practices elsewhere. With regard to the modern world economic history, the public sector has served a key policy function. Indeed, for many decades, there was proactive developmentalist state intervention in the so-called industrialized economies (Chang 2002b) and in Twentieth Century success cases in the developing world (Amsden 2003). If we consider, for example, the United States in the Nineteenth Century we see that there were enormous public financial backing to support investment in canals and railroads and the highest tariffs in the world to protect the domestic industry. For many developing countries, possibilities of engaging in any such policy effectively expired in the last two decades of the Twentieth Century because of the strict directions of economic policy originated from the Washington Consensus. So, under the guidance of International Monetary Fund and World Bank, several developing countries took steps to liberalize their external current and capital accounts along with domestic financial and, to a lesser degree, labour markets. Ultimately, public services and enterprises were indiscriminately privatized, downsized and reshaped or many times industrial policy interventions were completely removed, facilitating the success of a greater private sector role in general. With the liberalization process, policy makers in developing countries had their hands tied principally in the areas of macroeconomics and industrial policy, immensely tightening their socio-economic space. We consider that one important policy task for the future is to conceive institutional changes that combines insights from several versions of institutional analysis in order to rebuild that institutional capacity to underpin inclusive development, fostering simultaneously economic growth, democracy and human rights. In reviewing the interpretation of the current financial crisis started in the two year period 2007-2008 and the ensuing recession, while less theoretical attention has been given to developmentalism since the Asian crisis in 1997, we point out that the debate on the role of the state persists and even though there have been some problems with the developmental state paradigm, this does not necessarily mean that it is without substance and potential insights (Fine 2010). Thus, the renewing processes of developmental states offer a remarkable opportunity in analyzing how internal and external demands for change can establish a reconciliation and how democratic organizations can

become public goods for development in some territories and public bads in others (Lim 2009). The analysis of developmental states may also provide some evidences concerning the question of economic conversion versus diversion of the capitalist system (Kutznets 1955; Adelman and Morris 1973; Williamson 1965; Lim 2009). Some scholars argue that the approaches of capitalism would join up with globalization. Nevertheless, such issues have yet to be investigated empirically in order to establish whether developmentalism actually exists, and much we may be inclined to accept it conceptually (Lee and Ku 2007). Conceptually, the DS consider development as the major political objective. For this reason, the concept of development affects properly the type of policy and in particular the economic policy adopted. In the case of EADS, they interpreted the development strategy as an epigone of the economic catching-up process. This led to the results described in the “paradox of DS”, in other words the government policy implemented on the basis of short-medium term outcomes and focused solely on economic growth objectives. Such a development strategy does not leave much space to what is necessary for a full socio-economic development. This is shown by the scheme of perception of rights proposed by us in this study. As we discussed, the old model of DS is inadequate to pursuit the protection of the so-called first generation of human rights, such as civil and political rights. The latter are perceived by the policy-maker of the old DS only in a negative way and limiting with respect to the prerogatives designed for the function of the state. In addition, even the protection of human rights that citizens can claim to the State, the so-called rights of the second generation, such as economic and social rights, appears to have instrumental and partial character. The historical evidence deliver to us the EADS as an unique and unsustainable phenomenon in the long run. The DS model requires, therefore, to be updated through an integrated vision of development capable of matching the needs of the state and those as a necessary condition of full citizenship. The theories of human development and human rights show us how this could happen. The human rights field, dominated by law, philosophy and political science, does not address immediate indications for policy. The development field, conversely, is primarily dominated by economics and other technical or analytical competencies focused on the analysis of policy choices and specifically on the analysis of policy-relevant knowledge

systems. The economic and technical analysis can investigate policy alternatives identifying which ones are most economically efficient or technically effective. But policy options also depend on ethical choices, so that even the scope of human rights may support and advise such policy choices since there are no inherent contradictions between human rights principles and development (among others, see Fukuda-Parr 2011). In fact, human development and human rights are complementary theories that share a common motivation (UNDP 2000) and show us how the matching between the two theories is possible as studied by Sen (1984, 2004, 2005) and Nussbaum (1997). In a future work, we can refer to new tests and indicators to overcome the limitation highlighted by Mkandawire (2001). The elements pointed up in this study, in particular the distinction between the first and second generation of human rights, and their features, represent useful insights for thinking to a new family of indicators. Ultimately, in the present article we apply the scheme of perception to a model of democratic developmental state and, together with elements such as regionalism and globalization of markets, we can confirm its long-term sustainability. Only democratic participation and openness to the outside relationships can allow the state to achieve integral human development, that is the development of each man and of the whole man. The experience of the developmental state so far applied in the world also represent a sort of laboratory, unique for development economists: the discipline of development economics, in fact, is called upon to review its development indicators and to update the tests adopted until now. There is a need, indeed, of development measures capable of detecting the quality of democratic life of nations so as to be able to identify with more precision the relationship between the protection of human, political, economic and social rights, and the dynamics of development. Sen refuses the reduction of development to economic measurements, arguing instead that development consists simultaneously of the *“removal of various types of unfreedoms that leave people with little choice and little opportunity of exercising their reasoned agency”* together with *“a process of expanding the real freedoms that people enjoy”* (Sen 1999, xii, p. 3). Nevertheless, these measures of development would enable a more comprehensive economic modelling that allow the socio-economic development of a community by actively projecting it on a global level with human dignity.

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WORK ORGANISATION AND INCENTIVES

Abstract

This article examines the relationship between work organization and incentive instruments define by the employer. To do this, we examine the organization of the various tasks and functions of signal within companies. The signal is used to provide information to the employer regarding the quality of employee commitment and level of effort. Thus, the information used to define the variable part of the salary. We specify, finally, that this internal interdependence between the organization of work and incentive instruments combined with the influence of the institutional context. Therefore, this article enables to understand the determinants of optimal incentive policy to better productivity at work.

JEL CLASSIFICATION: A10; E20.

KEYWORDS: INCENTIVES INSTRUMENT; WORK ORGANIZATION; INSTITUTIONAL CONTEXT; PRODUCTIVITY.

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1. Introduction

Productive models across countries are characterised by a wide variety of how the production process is organised. Differences exist as regards to both the preponderant incentive contracts that are used to motivate a firm's workforce and the relation between workers within a firm and between the workforce and the management (a firm's organisation properly speaking). While these differences are by now well documented – including the increasing trend for within-country variation of productive models and employment systems (e.g. Katz and Darbshire, 2000) – only limited attempts have been undertaken to explicitly address the reason for this underlying heterogeneity (for a noteworthy exception in this regard see Marsden, 1999). Moreover, only relatively sketchy hints are given regarding the role of a country's institutional environment in influencing the selection of particular productive strategies.

In the following article, we propose a formalised way of integrating these questions into an encompassing framework, addressing simultaneously a firm's decision regarding the incentive structure and the organisation of its workforce. In particular, we show that both decisions will be taken as a package, as there are numerous complementarities between the way incentive contracts are set in place and the way productive tasks are distributed across workers. In a second step, our aim is it to link the ensuing productive models to the institutional environment in three different countries (Germany, USA, Japan) and to show how in these countries, the selection of productive models is at least influenced by the constraints that this environment is imposing on certain strategies.

The paper starts with the observation that a modern firm employs a variety of contracts to remunerate its workers¹ reflecting the multiple kinds of tasks that have to be carried out in a highly specialized economic and technological environment. An analysis of the heterogeneity of labour

¹ Such as the number of hours they prescribe, the level and composition of wages (fixed part, flexible part, bonuses), fringe benefits but also implicit elements such as the monitoring framework through supervisors and management and the coordination frame helping to resolve horizontal and vertical conflicts. For an empirical analysis of the variety of existing labour contracts in developed economies see Hartog and Theeuwes (1993).

contracts, however, cannot be undertaken satisfactorily without taking into account its relation to the organization of the firm, hence linking types of wage contracts to types of tasks performed by the worker and to the distribution of tasks within the firm. Given that different tasks are characterized by various informational problems, different skill requirements and (productive) spillovers with respect to other tasks, the way tasks are grouped to jobs – and jobs to the firm's internal organizational structure – will affect the optimal mix of incentives that have to be set by the firm. In turn, this link between organisation and incentives and a firm's choice in setting up its internal structure will be affected by the institutional environment in which the firm carries out its decisions, which may be particularly important in introducing new workplace practices (see Lorenz, 1999).

Three elements play a central role in a firm's decision of its internal organisation: incentives, skills, and productivity: All three elements will be affected by the extent to which they are used across the firm as complementarities across workplaces are likely to exist:

- Incentive instruments used by the firm will affect each other through their impact on the signal quality; increased monitoring by the supervisor, for example, not only increases the effectiveness of the use of efficiency wages but enhances also the use of tournaments by a better evaluation of relative effort levels.
- Firms provide investment in order to improve the skill level of their employees by ways of formal training or on-the-job learning. This investment will necessarily influence the incentives and the optimal effort level as well, as they reduce the costs of performing a certain tasks. Moreover, as has been noted earlier (Marsden, 1999), the training provided for certain tasks may also influence the effectiveness of training for tasks similar with respect to their training requirements; training complementarities may therefore arise.
- Individual productivity spills over through the division of labour. To carry out a certain task may increase the marginal effectiveness of the worker on another task or that of another worker on a similar task (as is usually the case with team production characterized by group fixed costs). In this case, productive complementarities exist that make grouping along these lines profitable.

Quite naturally, it is possible to think of these complementarities as of multiple layers that overlap with each other. Depending on which type is

stronger in a given environment, the firm will group tasks to jobs along one of these lines. However, even after grouping tasks to jobs there still may remain unexploited complementarities between different jobs (due for example to natural limits for task grouping on one job). More importantly, the type of organization and the use of particular incentive instruments may be affected by the fact that complementarities among tasks belonging to the same job and that of tasks for two different jobs may not be the same, reducing considerably the scope of human resource policy for the principal. Understanding the relations between task complementarities and job complementarities may therefore allow conclusions about the link between work organization and the use of particular incentive instruments.

Our analysis starts with a discussion of fundamental tasks – and their characteristics – carried out in a modern enterprise. In the optimal contract theory, these tasks are considered being characterized by a certain signal function, allowing only indirect evidence on the work effort by the employee; with a risk-neutral firm and risk-averse employees an optimal mix of contracts exists which allow to extract work effort for each task using a mix of efficiency wages, piece-rates and tournaments, depending on the variance of each signal. In the organisational theory, on the other hand, tasks are viewed from their productive interaction with each other. Here, incentive problems are considered to be solved already and hierarchical set-ups serve mainly the purpose of coordinating tasks and people; the organisation is then designed as to maximise complementary links within the organisation in order to enhance its productivity.

Bringing both principles together allows us to extend both approaches by explicitly taking into account the various dimensions of organisational design and to address the question of how the organisational design helps to overcome both incentive and productive problems. This, in turn, can be applied usefully to derive a richer picture of the variety of productive systems and its interaction with the (labour market) institutional environment as these institutions will affect the type of labour contracts available to the firm, the supply of skills and productive relations among workers within a firm.

The paper is organised as follows: the next section presents an overview on the existn organisational analysis in order to develop the basic principles of task complementarity and the functioning of the hierarchical components of a firm. In section 3, we integrate the organisational aspects with those regarding incentive determinants and develop a theoretical model that

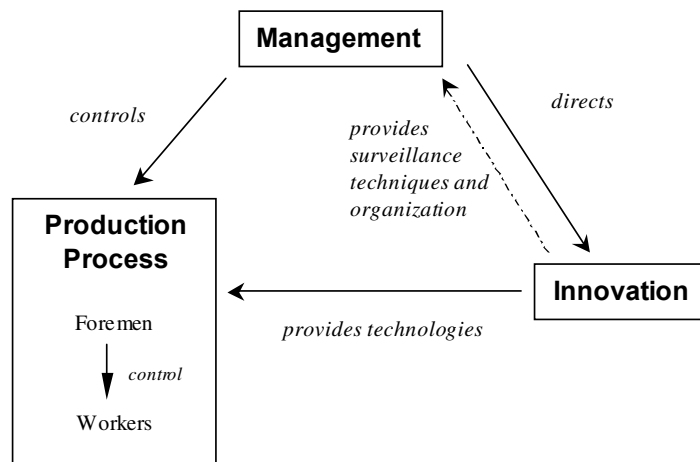
examines the interaction between the two. In section 4, we extend this analysis to allow institutional factors to affect both the organisational and the incentive aspects of the work relation. A final section concludes.

2. Dimensions of work organisation

2.1 The structure of productive systems and optimal contract theory

The modern firm is characterized by joint production and a hierarchical structure (see figure 1). Despite these commonalities among firms in developed economies, between and within countries, firms differ widely in their internal organization and the assignment of jobs. Similarly, their human resource policy varies and incentives used are highly idiosyncratic. Hence, this first part aims at a taxonomy of incentive instruments and organizational principles.

Figure 1. The structure of the productive process



Division of labor and the necessity to coordinate complementary tasks make it often obligatory to dispense the market mechanism in order to organize the work within a hierarchical structure where direct orders replace

allocations through relative prices. During this internalized transformation process, enterprises have basically to fulfill three fundamental tasks: to produce goods and services using specialized workers on complementary tasks; to develop new production processes, techniques organizational forms; and to provide management and surveillance effort in order to coordinate the production process. We will call these three basic tasks production, innovation and management. As our work is concentrated on the relation between work organization and incentives, we will abstract in the following from technological innovations.

The management provides various instruments to set incentives for work effort for the firm's employees (see table 1). The efficiency of these instruments, however, depends on the quality of the signal on which they are based. The signals, on the other hand, depend on the type of the task that has to be performed. Setting incentives, the manager has a basic choice among three fundamental instruments: (i) absolute measures based on fixed objectives; (ii) absolute measures based on variable objectives and (iii) relative measures.

Table 1. Who does what in an enterprise?

<i>Basic tasks</i>	<i>Do what ?</i>
Management	Controls the production and innovation process
Production	Uses productive techniques according to managers' and foremen orders
Innovation	Provides new production techniques and helps to find new organizational structures

The management controls both the productive sphere and the R&D-sector of the firm. This may be done due to a different surveillance technique. It seems to be evident that an assembly line worker can be more easily controlled and his effort more exactly evaluated than an engineer working on a new product or on a simple product improvement. Especially, in the

second case, different forms of specific investment from the (innovative) employee and/or the firm considerably complicates the employment relation (see, e.g., Malcomson, 1997). In our subsequent analysis we will distinguish these two tasks first of all relative to the variability of the outcome and to the quality of the monitoring technique. Productive tasks are supposed to be subject to much lesser variability and management may control them and evaluate their effort much easier (and eventually even for a smaller price) than innovative tasks.

Productive workers on a whole employed in the production process are supposed to do their job according to orders coming from the management. Within the production process, however, there exist another hierarchy between foremen and workers, the former directly monitoring the latter. Their effort can be only approximately evaluated. This gives them the incentive to lower their effort by still obtaining the same wages. Supposing a highly divided production process one may say that workers may be more easily monitored whilst the effort of foremen in evaluating and monitoring workers may be less efficiently surveyed. The management has two fundamental strategies in order to provide incentives for these workers. They may monitor them directly with a (unfortunately) blurred surveillance technique; when they state that the worker has not fulfilled his labor contract he loses his job immediately. Or they may link a part of the workers remuneration to an imperfect signal such as profits or the like. We exclude here, that workers can be promoted to better paid jobs with higher responsibilities adopting a segmented labor market hypothesis (see Doeringer and Piore, 1971). This may seem a rather strong assumption but it has some relevance as to the effective promotion behavior of existing firms.

Workers employed on innovative tasks have a little bit more freedom in doing their job. We already mentioned that in the following the fundamental difference between productive and innovative tasks is seen in the variability of the outcome and in the lower quality of monitoring techniques to evaluate their effort. (An engineer laying in his office seat with his eyes almost closed may be hard thinking or sleeping!) As well as with workers on productive tasks, the management has to choose between different incentive instruments like monitoring with firing or remuneration according to some imperfect signal. In order to keep matters simple, we suppose that these workers have no possibility to promote, neither.

Finally yet importantly, the management is supposed to monitor both the productive and the innovative tasks. We suppose that they cannot monitor

themselves, at least not by using any monitoring technique. The instrument they use is more to be seen in an internal labor market where promotion is possible due to relative work evaluation according to some signal attached to one's performance. This internal labor market is open only to workers on innovative tasks (which makes the hypothesis that they do not dispose of any promotion schemes on their original jobs more acceptable) but not to workers on the productive task (segmented labor-market hypothesis). The other instrument they (better: the shareholders) can use in order to stimulate effort is - of course - linking wages to signals like profits (stock-options, etc.).

Furthermore, the discussion of the role of the residual claimant remains grossly unaffected by any considerations of internal hierarchies (the best example may be Alchian and Demsetz, 1972, who only discuss the firm as a joint production phenomenon). On the other hand, the literature on hierarchies and rank order tournaments does not much relate to macroeconomic topics and incentives are mainly considered by referring to optimality and efficiency. Thirdly, the existing literature does not consider questions of innovation and innovative activity by the firm. There may, however, be specific problems coming from this kind of activity which is shown, e.g., by the discussion in Aghion and Howitt, 1998. Only an integrating view may shed the right light on the link between incentive problems and the internal organization of the firm. Thus, the work in this article is based on the link between the more microeconomic principal-agent literature, the more macroeconomic efficiency-wage literature and question of innovation and innovative activity.

2.2 Organisational theory

What is an economic organization? Robbins (1990) states that “an organization is an economic coordination unit with identifiable boundaries and operating relatively continuously to achieve a goal or set of goals shared (s) by participating members”. From this definition, we use three important elements for identifying the characteristics of the economic entity: it is, first, a set of participants, second a formal coordination unit and finally it manifests an agreement among participants on some objectives.

Given a set of participants, the firm is responsible for defining individual actions and to ensure, subsequently, their arrangement within a collective framework. This question should theoretically be treated in two steps:

define, first of all, a principle of assigning tasks to individuals and define thereafter, another to form units of work. Mintzberg (1982) refers to three parameters involved in the design of individual workstations of an organization: the specialization of labor, training and socialization, and finally the formalization necessary for the performance of work behavior.

The production process is divided into several stages, because employees cannot carry out all of them at once; the employer assigns tasks to each employee depending on their type of specialization. The principle of the design and placement of workstations raises the question of the rights and obligations of each other in a working relationship. This establishes, in fact, the limits of the authority of the employer. We examined above the impact of asymmetric information on the employment relationship by focusing specifically on opportunistic behavior by employees. But there are some cases of opportunism by the employer. Hence, it matters whether the employer has all the rights on the allocation of tasks to employees.

This question was addressed by Coase (1937) and Simon (1951) who both explained the emergence of the employment relationship by emphasizing its simplicity and low cost compared to the conventional process of coordination on the market. According to Coase, the employer is the one to choose freely the tasks to be performed by the employee "within limits". Simon speaks of a "zone of indifference" of the employee for the employer to choose the tasks at hand. This allows to achieve a flexibility in the employment relationship as the employee is required to perform, at any particular moment, a particular job based on data from the production process.

There are only two cases with a risk of opportunism, to which the employee may be exposed: the unilateral increase in the number and quality of tasks to be performed, for example by making them more painful and more difficult; and the exemption of certain tasks making employment increasingly vulnerable issue in the future. Being aware of this problem, it is possible to think of the development at the time of signing the employment contract, a detailed inventory of all the tasks that the employer can ask the employee. Needless to say, a detailed description of all tasks is very expensive and could lead to conflicts at work. Slichter, Healy and Livernash (1960), moreover, stressed the disadvantages of this method into a firm adherence to written descriptions of job duties. Williamson (1975) pointed out, moreover, that such an approach is too rigid to labor relations.

In response to this question, Marsden (1999) provides a working principle of labor relations for limiting the opportunism of the employer and encouraging employees to accept this method of coordination. This is the development by the employee and the employer of rules defining the type of tasks that it can affect the employees of a particular category. These rules must meet the “stress competence” and “contractual constraint”. The first is to ensure a relationship between employee skills and technical requirements of the production process and the second is to allow easy control of the obligations of each other in this relationship. We will focus in this section on stress skills which will enable us to grasp the principles of allocation of tasks and grouping. That said, we will discuss one aspect of the contractual constraint that takes control and enforcement.

We can offer solutions to each constraint. Regarding the stress of jurisdiction, it retains two ways of organizing work, so tasking. It relies for this on the principle of complementarity. We find two types of complementarity: complementarity relating to staff training and a second into the requirements of the production Lazear (1995) calls the production approach. For the first, it is the ease that an employee may have to provide two complementary tasks, in terms of training the employee.

As for the second approach, it takes the requirements of production tools. Some tasks can be closer to each other and minimizes travel time by assigning them to the same employee. Piore (1968) provides several examples explaining this approach in a study of organizational choices engineers productions in the United States. We develop, moreover, in this work a third principle of allocation and task organization. This is, this time, complementarity in terms of incentives. The employer assigns two tasks require the same push factors and motivation, the same employee. We will analyze this principle in more detail below.

When the logic of incumbency is defined an obvious question arises: how to group tasks to form units of work? We find with this issue, the contractual constraint mentioned above. We can suggest two solutions to meet: functional organization and logic training. The analysis instead, this time, at another level of complementarity. Indeed, the above two principles remain valid, but to structure the grouping of tasks. The functional organization refers to a grouping of tasks with the same technical requirements. In this approach, the emphasis is on the social organization of the group and internal rules to distribute work among the different members. As for the logic of training, it takes into account the skills of employees to generate a

complementarity between the group members. The third and final mode grouping of tasks refers to complementarity between the components in terms of incentive factors proposed by the employer.

The grouping of tasks, so employees in work unit is the basis for the formal authority and hierarchy of the organization (Mintzberg, 1982). Indeed, it must be clear rules for allocation of positions of responsibility and decision-making power asymmetry between the group members in order to avoid litigation.

Found, so the size of the delegation of power and / or authority to lower levels. This refers to a concept of order among the participants of economic organization is commonly called the hierarchy. Recall that there is a hierarchy between two sub - assemblies of participants A and B when the subset B refers to the objectives of the subset A rather than his own when making a decision, and makes his decision that of A when there is conflict (Wilhelm, 1972). In this context, employees are assigned to hierarchical ranks that are related to each other. Each rank has decision-making power and, therefore, a level of responsibility. Management is referred in this connection, to define the scope and limitations of each hierarchical rank and contributions.

As such, the wage relation is a hierarchical relationship between employer and employees. It specifies, in addition, the hierarchical constraint by associating compensation arrangements (Menard, 1995). The employer must specify the nature of information that should be assigned to a particular hierarchical level as this would improve the quality of decision making (Menard, 1995).

Martin (1994) notes the existence of three categories of communication networks and, therefore, coordination between different parts of the organization. Hierarchical coordination prevails in pyramidal structures. Second, complex functional coordination favors transmission of information generated by organizations with many activities that require specialized skills (Martin, 1994). Finally participatory coordination emphasizes that workers communicate information to decision makers. Coordination modes are, therefore, defined in terms of the organizational structure of the firm. The influence of this structure extends to the touch, then control methods.

Once the information is transmitted, some jurisdictions monitor the implementation of decisions. Being at the heart of the relationship between policy makers and executors, control remains conditioned by the way the structure is set.

Membership in the organization is moving, moreover, by an acceptance and respect for the structuring standards. It is internalized by employees of standardized behaviors (Mintzberg, 1982). Arrives, finally, training to employees to acquire the knowledge needed for the position work.

The flow of information is, in this sense, an interesting example. Employees have information on how the production process and the knowledge of which is essential for the functioning of the whole. But they may not disclose or bias hence the importance of incentives means that the employer must implement. Barnard (1938) was, moreover, said that incentives are a central point at the junction between agents' behavior and the phenomena of information. We find, as well, motivational and incentive aspect of the working relationship that the employer faces is taking into account the aspirations of employees but especially the objectives of the organization. The development of an incentive policy is, therefore, complex and therefore requires a very careful consideration as to the profitability of the proposed factors.

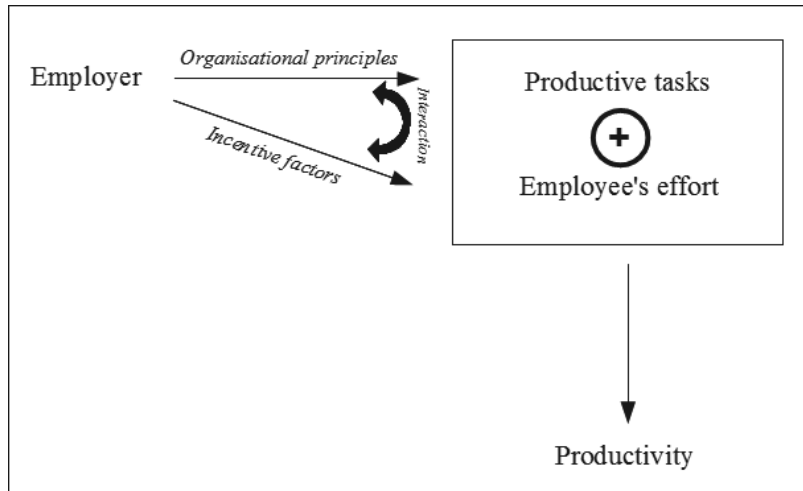
3. Organization and incentives

In the following, we will develop a formal model that helps to understand the specific link that exists between the incentives that can be provided by the employer and the organizational concept he can apply to maximize the productivity of the workforce. Formalizing this link is particularly helpful in this context as it will provide clear insights regarding the determinants of the different incentives-organization packages. This will be relevant in the next section when we turn to the question how the institutional environment in which the firm operates is impacting on the work organization of the firm and through which mechanisms.

3.1 Dimension of incentives

The incentive policy includes a set of factors driving (or convincing) employees to join the organization, but especially to stay to serve its purpose. So the question of the convergence of objectives of the various participants is at the heart of any organization's incentive policy (see figure 2).

Figure 2. Interdependence between organisational principals and incentive instruments



As long as all actors in the firm share the same objectives, it becomes convenient to encourage employees to reveal their preferences and information they have. The literature has proposed two procedures in this direction: to make the resource allocation dependent on the information obtained from all participants (Croves 1974). Or to share profits to improve the participation of all components of the organization (Bonin, 1976; Weitzman, 1974). In reality, however, heterogenous preferences of workers and conflicting interests lead to heterogeneous motivations.

Indeed, preferences and motivations are generally defined in terms of employee characteristics (age, sex, education level, etc.). Take age, for instance. Younger employees tend to value training and career perspective besides the wage; older workers, however, might have a stronger preference for an immediate and sustained increase in their income. Both options may conflict with the goals of the firm, which might be to maximize short-term profits. Several aspects are of relevance in this respect: wages and benefits, training, flexibility, career perspectives ... etc. Career perspectives seem important for employees because they are synonymous with improved occupational status and, therefore, the level of income. This diversity of

these factors raises questions about the relevance of their hierarchy within the firm. This will discern the priorities of the firm in managing its employees in connection with its objectives. The organizational structure of the firm seeks to identify, at least in part, these factors. Indeed, the two approaches to the design and allocation of work have different requirements in terms of incentives.

The training approach would require much investment on both sides in terms of training and skills broadening the approach to production. Thus, when the organization would require significant human capital, training will be automatically coupled to the salary remains the primary motivating factor. It is, therefore, to encourage employees to improve their initial human capital, but also to stay in the same company. In this regard, Aoki (1995) analyzed how incentives are ordered within the Japanese firm in relation to its organizational logic.

Once we address this aspect of the employment relationship, an obvious question arises: according to which principles should work incentives be defined? Based on the interdependence between organizational structure and incentive factors we develop a model, in light of which we define methods for determining incentive instruments.

3.2 Interaction between incentives and workplace organization

3.2.1 Forms of contractual incentives

The principal assigns different tasks² to the agent for which the latter chooses his effort level e_i , where $i \in \{1, \dots, M\}$ indexes the different tasks. In order to achieve the optimal effort level for the set of tasks, the employer uses several incentives that include direct monitoring of the agent, piece-wise remuneration and tournaments among different agents.

a) Monitoring

² In contrast to Marsden (1999), we assume that job classifications and assigning jobs to tasks can be done frictionless and without any commitment problems. While it would be in principle possible to integrate these elements into our analysis, we want to concentrate in the following exclusively on the link between task organisation and incentives.

By monitoring the agent directly, the employer uses the monitoring signal:

$$s_k = f_k(e_k) + \varepsilon_k$$

where $\varepsilon_k \sim N(0, \sigma_m^2)$, $k \in \{1, \dots, K\}$ and the signal vector: $\mathbf{S} = (s_1, \dots, s_K)$. This results in the following incentive scheme:

$$\omega(\mathbf{S}) = \sum \omega_k s_k + \beta$$

where ω_k designates the agent's salary contingent on successful monitoring of tasks k and β a fixed bond (which may be negative).

b) Piece rates

When using piece rates, the agent's remuneration depends directly on the output of the task's achievements:

$$x_k = \alpha_k e_k + \varepsilon_k$$

with $\varepsilon_k \sim N(0, \sigma_p^2)$, $k \in \{K+1, \dots, L\}$ and the output vector $\mathbf{x} = (x_{K+1}, \dots, x_{K+L})$. Consequently, the contingent pay takes the form:

$$\theta(\mathbf{x}) = \sum \theta_k x_k$$

where θ_k stands for the piece rate attached to a measure unit outcome x_k of task k .

c) Collective objectives

An alternative to individual contingent pay is to use the group of workers as a common residual claimant (Bowles and Gintis, 1998). Suppose that the firm has only two workers, then joint production is given by:

$$X_k = \eta_k (\mathbf{e}_1 + \mathbf{e}_2) + \varepsilon$$

with $\varepsilon_k \sim N(0, \sigma_{cp}^2)$, $k \in \{K+1, \dots, L\}$, the output vector $\mathbf{X} = (x_{K+1}, \dots, x_{K+L})$ and $\mathbf{e}_j = (e_{j1}, \dots, e_{jM})$ the effort vector of worker $j \in \{1, 2\}$. In this case, the contingent pay writes as:

$$\tilde{\theta}(\mathbf{X}) = \sum \tilde{\theta}_k X_k$$

where $\tilde{\theta}_k$ stands for the piece rate attached to a measured unit outcome X_k of the *group* task k .

d) Tournaments

Finally, when the principal uses a tournament to extract effort, the signal function depends on relative effort³ $e_i - e_j$:

$$r_{ik} = g_{ik}(e_{ik} - e_{jk}) + \varepsilon_{ik} - \varepsilon_{jk}$$

with $\varepsilon_i, \varepsilon_j \sim N(0, \sigma_r^2)$, $k \in \{L+1, \dots, M\}$ and for an individual with multiple tasks $\mathbf{R} = (r_{L+1}, \dots, r_M)$. This results in the incentive scheme:

$$d(\mathbf{R}) = \sum \delta_k r_k$$

where δ_k designates the prize of the tournament attached to task k .

e) The incentive package

Given these different types of incentives, the employee's implied financial payoffs, W , from the organizational design $(\omega, \theta, \tau, \delta, \Sigma)$ can be written as:

$$W = \sum \omega_i s_i + \sum \theta_i x_i + \sum \delta_i r_i + \beta - c(\mathbf{e}, \tau) + \varepsilon \quad (1)$$

where $c(\mathbf{e})$ stands for the disutility of the action the agent carries out, $\mathbf{e} = (e_1, \dots, e_M)$ designs the effort vector and $\boldsymbol{\varepsilon} = (\varepsilon_\omega, \varepsilon_\theta, \varepsilon_\tau)^T = (\varepsilon_1, \dots, \varepsilon_M)^T$ the vector containing the error terms where $\varepsilon_{ik} \sim N(0, \sigma_{ik}^2)$ and Σ the variance-covariance matrix. Disutility is assumed to be convex, i.e. $c_e > 0$, $c_{ee} > 0$.

Moreover, we have $c_\tau < 0$, $c_{e\tau} < 0$ and $c_{e_i e_{-i}} = 0$, i.e. training provided on task e_{-i} does not affect the marginal cost of task e_i . Finally, we assume that training is supposed to have diminishing impact on the cost function with increasing effort, i.e. $c_{ee} > 0$.

³ The effort of agent i will hence be evaluated relatively to agent j who is working on the same hierarchical level with similar tasks.

3.2.2. The value of cooperation

In order to determine the profit maximizing use of the above incentive instruments, the principal will maximize his profit function against the agent's effort reaction function.

a.) The worker's utility function

The worker is supposed to be risk-averse and deriving utility out of his wage contract W along the following constant risk-aversion utility function:

$$U(W) = -\exp(-\zeta W)$$

where ζ is the absolute risk aversion. Then, the certainty equivalent of the employer⁴, ACE, takes the following form:

$$ACE_j = \sum \omega_i f_i(e_{ji}) + \sum \theta_i \alpha_i e_{ji} + \sum \delta_i g_i(e_{ji} - e_{-ji}) + \beta_j - c_j(e_j, \tau) - \frac{1}{2} \zeta V_j(\omega, \theta, \delta, \Sigma)$$

where $V(\bullet)$ contains the linear terms regarding the stochastic variances of (1) and is quadratic in all other corresponding terms.⁵ The optimal choice of the employee regarding his effort level e^* is determined as follows:

$$e_j^* = \arg \max \left\{ \sum \omega_i f_i(e_{ji}) + \sum \theta_i \alpha_i e_{ji} + \sum \delta_i g_i(e_{ji} - e_{-ji}) - c_j(e_j, \tau) \right\} \quad (2)$$

Notice that - in the absence of any complementarities between tasks - the optimal effort level e_j^* will be unaffected by the covariance matrix Σ as this is independent from the agent's actions. However, the covariance matrix will determine the optimal choice of instruments by the principal as can be seen in the following.

⁴ See Laffont, 1991, p. 39-51 regarding the certainty equivalent.

⁵ See Varian, 1992, p. 189 for a detailed analysis of this equation.

b.) The profit function of the employer

In order to determine the use of incentives instruments, the principal will maximize his profit function conditional on the effort reaction (2) by the employee. The expected agent's contribution to the firm's profits, Π_j , can be characterized as follows:

$$\begin{aligned} E\Pi_j &= \pi_j(e_j) - \sum \omega_i s_i - \sum \theta_i x_i - \sum \delta_i r_i - \beta - M(\Sigma) - E(\tau) \\ &= \pi_j(e_j) - \sum \omega f(e_j) - \theta \alpha e_j - \delta g(e_j - e_{-j}) - \beta - M(\Sigma) - E(\tau) \end{aligned}$$

where $M(\Sigma)$ represent the control costs – associated with the signal vector \mathbf{S}_j – and $E(\tau)$ the training costs with $E' > 0$, $E'' > 0$. Assume that the employer only uses one incitation instrument for each individual task, then the first order conditions for the different instruments can be written as follows:

$$\begin{aligned} \frac{\partial E\Pi_j}{\partial \omega} = 0 &\Leftrightarrow \frac{\partial \pi_j(e_j)}{\partial e_j} \frac{\partial e_j}{\partial \omega} = f(e_j) + \omega f'(e_j) \frac{\partial e_j}{\partial \omega} \\ \frac{\partial E\Pi_j}{\partial \theta} = 0 &\Leftrightarrow \frac{\partial \pi_j(e_j)}{\partial e_j} \frac{\partial e_j}{\partial \theta} = \alpha e_j + \theta \alpha \frac{\partial e_j}{\partial \theta} \\ \frac{\partial E\Pi_j}{\partial \delta} = 0 &\Leftrightarrow \frac{\partial \pi_j(e_j)}{\partial e_j} \frac{\partial e_j}{\partial \delta} = g(e_j - e_{-j}) + \delta g' \frac{\partial e_j}{\partial \delta} \\ \frac{\partial E\Pi_j}{\partial \tau} = 0 &\Leftrightarrow \frac{\partial \pi_j(e_j)}{\partial e_j} \frac{\partial e_j}{\partial \tau} = [\omega f'(e_j) + \theta \alpha + \delta g'] \frac{\partial e_j}{\partial \tau} + \frac{\partial E(\tau)}{\partial \tau} \end{aligned}$$

Given that the employee is risk averse, interior solutions existent for the first three equations. Moreover, the convexity of the cost function for training guarentees that there is also an interior solution for the last equation (see

Holmström and Milgrom, 1994). Let's denote $(\hat{\omega}, \hat{\theta}, \hat{\delta}, \hat{\tau})$ the profit-maximizing solution for the employment that results in the optimal effort level \hat{e}_j .

c.) The value of the organisation

Given the optimal choice of incentive instruments and effort levels, the total value resulting from cooperation, TCE, can be written as follows:

$$TCE_j = \Pi_j + ACE_j = \pi_i(e_j) - M(\Sigma) - E(\tau) - c_j(e_j, \tau) - \frac{1}{2}\zeta V(\omega, \theta, \delta, \Sigma) \quad (3)$$

Hence, in order to be considered an efficient organization, it needs to satisfy the following condition:

$$\max_{\omega, \theta, \tau, \delta, \Sigma} TCE_j = TCE[e_j^*(\omega, \theta, \tau, \delta), \omega, \theta, \tau, \delta, \Sigma]$$

3.3. Grouping tasks to jobs

In the following, we will develop a formal model that helps to understand the specific link that exists between the incentives that can be provided by the employer and Given the effect of the different incentive instruments on the employee's effort level e_j^* , the firm needs to determine the type of tasks $\{t_i, \dots, t_{i+n}\}$ to regroup into a particular job T_j , assuming that each job is only held by one individual agent. To carry out this analysis, we need to distinguish between three types of task complementarities:

Definition 1: Three tasks complementarities can be distinguished:

1. *Incentive complementarities (IC).* These complementarities exist whenever for two different tasks and one incentive instrument $\xi = (\omega, \theta, \delta)$ the following relationship holds:

$$\frac{de_{j1}}{d\xi} > 0 \wedge \frac{de_{j2}}{d\xi} > 0 \quad (H1)$$

2. *Training complementarities (TC).* This complementarity exists whenever:

$$c(e_j, t_{i1}, t_{i2}), \frac{\partial^2 c(\cdot)}{\partial t_{i1} \partial t_{i2}} < 0 \text{ and } E_j = E(t_{i1}, t_{i2}), \frac{\partial^2 E}{\partial t_{i1} \partial t_{i2}} < 0 \quad (H2)$$

3. *Production complementarities (PC).* This complementarity exists whenever:

$$\begin{aligned} x_{i1} &= \alpha(e_{i2}) e_{i1}, \alpha_{i1} \sim N(\mu, \sigma^2), \alpha'_{i1} > 0 \\ \text{and/or } x_{i2} &= \alpha(e_{i1}) e_{i2}, \alpha_{i2} \sim N(\mu, \sigma^2), \alpha'_{i2} > 0 \end{aligned} \quad (H3)$$

This definition allows us to put forward the following proposition:

Proposition 2: Let one of the complementarities of definition 1 hold. Then:

1. When IC holds (hypothesis H1), then **TCE** is complementary in ξ where $\xi = (\omega, \theta, \delta)$ is the vector of incentive instruments.
2. When TC holds (hypothesis H2), then **TCE** is complementary in t where t is the vector of training investments.
3. When PC holds (hypothesis H3), then **TCE** is complementary in \hat{t} where \hat{t} is the vector of productive tasks.

Proof: The proofs makes use of characteristics of supermodular functions (see Topkis, 1998) :

1. Suppose the tasks e_j are supermodular in ξ , then $\pi_i(e_j) - c_j(e_j, \cdot)$ is also supermodular in ξ . Hence we only need to verify $V(\bullet)$, which is independent from the actions undertaken by the employee.
2. The sum of supermodular function is also supermodular. Hence, when tasks are chosen such that $c(e_j, \tau)$ and $E_j(\tau)$ are supermodular in τ , then it follows that TCE_j is also supermodular in τ .

3. If there are production complementarities between tasks t_i and t_j , the profit function $\pi_i(e_i, e_j)$ has positive cross derivatives whereas all other terms in (3) remain unchanged.

Remark 3: Note that production complementarities do not require that there are also incentive complementarities. The cross derivative of V for complementary tasks writes as:

$$\frac{\partial^2 V}{\partial \theta_1 \partial \theta_2} = -2\zeta \theta_1 \alpha'(e_2) \frac{\partial e_2}{\partial \theta_2} \sigma_{p1}^2 < 0$$

For high levels of risk aversion, ζ , these tasks are even incentive substitutes.

This leads to the following corollary:

Corollary 4: Incentive complementarities exist only to the extent that the tasks affect the covariance matrix. Suppose that the error terms ε_{ik} are independent of each other and that no production complementarity exist between tasks i and the other tasks. It then follows that given the linearity of the incentive instruments, $\xi = (\omega, \theta, \delta)$, incentive complementarities between different employees only exist if and only if an incentive instrument reduces the variance of the signal function for another task or another incentive instrument.

Proof: Given the optimal effort level \mathbf{e}^* in (3), the first-order derivative of the cooperation value, TCE, with respect to a single incentive instrument, ζ , writes as:

$$\frac{\partial TCE}{\partial \xi} = \frac{\partial \pi}{\partial \mathbf{e}} \frac{\partial \mathbf{e}^*}{\partial \xi} - \frac{\partial M}{\partial \Sigma} \frac{\partial \Sigma}{\partial \xi} - \frac{\partial c}{\partial \mathbf{e}} \frac{\partial \mathbf{e}^*}{\partial \xi} - \frac{\zeta}{2} \left[\frac{\partial V}{\partial \xi} + \frac{\partial V}{\partial \Sigma} \frac{\partial \Sigma}{\partial \xi} \right].$$

As there are no cross effects in the profit function of the firm and the effort function of the employee, the only cross effects exist in the covariance matrix :

$$\frac{\partial^2 TCE}{\partial \xi \partial \xi'} = -\frac{\partial M}{\partial \Sigma} \frac{\partial^2 \Sigma}{\partial \xi \partial \xi'} - \frac{\zeta}{2} \frac{\partial V}{\partial \Sigma} \frac{\partial^2 \Sigma}{\partial \xi \partial \xi'}. \blacksquare$$

3.4. Organization of the firm

When grouping employees to form teams various combinations can be put forward, the more complex the bigger the team to be formed. Moreover, the tasks assigned to different individuals may be characterized by different types of complementarities than those forming the basis of the individual job. In the following, we want to concentrate on the simplest case where only like-minded employees are put together and only one type of complementarity between tasks between workers can arise. This still leaves us with 6 different cases.

3.4.1. The cooperation between multiple workers

The contribution of multiple agents to the firm's profits can be characterized as follows:

$$\Pi = \sum_j \pi_j(e_j) - \sum_j \sum_i \omega_{ji} s_{ji} - \sum_j \sum_i \theta_{ji} x_{ji} - \sum_j \sum_i \delta_{ji} r_{ji} - \sum_j \beta_j - M(\Sigma) - \sum_j E(\tau_j)$$

For the individual agent her certainty equivalent can be stated as before yielding optimal effort as characterized by (2).

3.4.2. The total value of the firm

The total value that arises out of cooperation can be calculated as:

$$\begin{aligned} TCE &= \Pi + \sum_j ACE_j \\ &= \sum_j \pi_j(e_j) - M(\Sigma) - \sum_j E(\tau_j) - \sum_j c_j(e_j, \tau) - \sum_j \frac{1}{2} \zeta V_j(\omega, \theta, \tau, \delta, \Sigma) \end{aligned}$$

In the trivial cases where the tasks allocated to different individuals display the same type of complementarity as the tasks of each agent individually, the above proposition applies. Here, the reason that these tasks have not all be assigned to one single agent must be found in physical limits. We therefore want to concentrate on the remaining cases where complementary differences exist.

Proposition 5: (*Firm organization and incentives*) Suppose that the firm is composed of a principal and agents 1 and 2. Then the following cases may be distinguished:

1. Suppose that $T_1, T_2 \in TC$ and $T_1 \xleftarrow{IC} T_2$. Then the principal will chose a tournament as an optimal incentive measure.
2. Suppose that $T_1, T_2 \in TC$ and $T_1 \xleftarrow{PC} T_2$. Then the principal will rely on mutual monitoring with an output target as group objective.
3. Suppose that $T_1, T_2 \in PC$ and $T_1 \xleftarrow{TC} T_2$. Then the principal will form training centres and management by communication.
4. Suppose that $T_1, T_2 \in PC$ and $T_1 \xleftarrow{IC} T_2$. Then agents will be imposed a common incentive instrument. The number of agents where this applies defines the control span.
5. Suppose that $T_1, T_2 \in IC$ and $T_1 \xleftarrow{PC} T_2$. Forming a group of agents with incentive complementary tasks into a group by exploiting their productive complementarities decreases incentive costs.
6. Suppose that $T_1, T_2 \in IC$ and $T_1 \xleftarrow{TC} T_2$. The value of the organization will not be affected by organizing these agents into one group.

From the analysis of the individual characteristics of different tasks we are then able to develop abstract organizational patterns. It is interesting to note that cases 5 and 6 involve situations of independence of incentives from the organizational form. Grouping employees in the manner described by these two cases, the types of incentives that the employer will favour is not defined by the structure of the firm.

In all the other cases, a clear pattern can be established between the organizational form and the type of optimal incentives for each situation, an

intuition that was the basis of this article: Incentives cannot be conceived as being independent of how jobs are organized within the firm.

Moreover, even if there is a complementarity between tasks - and therefore the supermodularity of the objective function – that structure tasks into a job (as has been proposed by Milgrom and Roberts, 1994), the organization of jobs within the firm can significantly alter the assessment that the employer may have with respect to the types of grouping tasks. One of the dimensions that are likely to affect the choice of organization is also constituted by the institutional environment that alters the opportunity costs, such as the education and vocational training policies of a country. In the next section, we will take a closer look at these issues, using concrete country cases.

4. Institutions and workplace organisation

Based on the findings of the theoretical model we will examine the organizational and incentive for large companies to three industrialized countries (Germany, USA and Japan) practices. The aim is to clarify how the institutional context becomes a criterion for selecting a particular organizational principle and thus for a given incentive tool.

4.1. The German model

The German economy is characterized by a strong institutionalization of corporate finance and employment relations. Business financing is provided by a highly developed network local and national banks, while unions are associated with the operation of the business by the system of "co-management". This guided by powers established and recognized system (banks, industry, professional associations and labor organizations) led the social partners to a kind of collective consciousness (Urban et al., 1988).

The major areas of competitiveness of German companies focus on capital goods tailored to the demand in the international market: chemicals, machine tools and automobiles. The position of German companies on the international market has not been achieved, moreover, by cost competitiveness but rather by qualitative competitiveness (Streeck, 1992). It is mainly relying on the qualification of labor, organizational investment and systematic human resource development (Coriat, 1990), which explains the importance of vocational training in the German system. This dual training

allows the company a selective admission, and the youth know about the workplace and have practical training. All these data were conducive to a work environment in business and popular forms of cooperative and orderly management.

The German vocational training system is a model of reference in Europe. The problem of initial vocational training for young people, this system often called "dual system" (Urban et al., 1988) based on the principle of alternation and close liaison between the school and industry brings an original answer. The company, in its dual role of educator and employer sends an apprentice training and education suited to its requirements. To return to the selection process, people who enter the dual system are selected in relation to their knowledge, but also in view of aptitude tests and a thorough interview. Not to mention that the methods for selecting candidates are defined with the works council at which a large part of employees.

To all these explicit and formalized information, add any that are implicitly guaranteed in the current context of the work of the company. It is important to note that the professional degree does not translate better prepare each individual for the performance of specific tasks but possession of a type, and a certain level, multipurpose industrial capacity (Silvestre, 1998). Industrial hierarchy in German firms, favors the level reached in a professional scale that would identify a system of hierarchical degrees. The largest nesting in the workshop practices that fall under the technical management and social management plays a central role in the existence of synthetic benchmark that is the possession by each worker a degree (Silvestre, 1998).

Thus, information runs through the various hierarchical levels. This is all the more important that the partitioning does not allow instant information dissemination. Each organizational unit is required to provide his own plays at the right time, in the right quantity at the desired location and in the desired form. This process involves a good consistency and quality of decision, but time consuming.

The employer withholds part of the corporate policy tools incentive for him to push young people to follow the apprenticeship system and to encourage employees to meet the demands of the industrial strategy applied in terms of qualifications.

The following dual system youth are paid during their training. The supervision of these young people is attributed to internal employees who are encouraged to do so (using incentive pay). Professional competence is

highly valued in itself. The employee regardless of their professional status is consulted for internal company decisions. Skilled workers receive a wage career that can lead them to positions of responsibility. They have thus a high potential to develop. Their qualification allows them mobility on the external labor market. Employees receive a salary changes according to their performance and productivity at work. This is assessed by direct supervision.

The training effort and skill displayed by the firm is combined with job security. When the market is down, the company prefers to retrain its employees as redundant. This is due, firstly, to the fact that the costs incurred for recycling are less important than pay, and secondly, in the interest of basic qualification available to employees.

In terms of job performance and productivity, a kind of consensus was observed between unions, employees and employers on productivity standards and level of performance as the union refuses to fight for a dismissal of workers whose performance is not satisfactory. However, unions play a key role in the system of dismissal for continued cooperation between the social partners.

4.2. The American model

Industrial culture as we know it today was developed in the United States between the wars. The mass production allowed for economies of scale, facilitated depreciation of machinery and equipment and made finally allow maximum use of low-skilled labor and cheap (Beranger, 1987). The decrease in production costs generated increased productivity gains and lower therefore selling prices. This allowed a higher standard of living. The scientific organization of labor was based on rules to achieve this efficiency. Any task undergoes a preliminary analysis was to be done through a careful analysis of the existing, and decomposition gestures. The analysis of the workstation and its description are allocated to engineers, where the separation between design methods and execution. Industry experts were asked to identify and optimize the duration of each task at each workstation.

The objective is to minimize idle time, he sought to limit professional autonomy available to the worker via an external formulation criteria and production goals. In this scheme, the main function of the operators is not to improve the organization and functioning but to respect and apply the

standards set carefully. To function properly, this scheme provides incentives and incentives to some workers who were to serve as a model for others. The best way to pass the membership of these is to offer them higher salaries. When asked the workers to work every day, it is absolutely necessary to ensure that they have a higher salary every time they succeed (Ballé 1990). This systematization of tasks successfully increased worker productivity. However, they have expressed rejection of any logic monotony and repetition as a result of the deepening of the division of labor that occurs in the 70s.

During this period, a fragmentation of tasks and sharper horizontal division of labor occurs more intense which is included in the layout of workstations and the facilities themselves (Stroobants, 1993). Each worker must perform a specific task dictated a foreman under formal or customary rules of manual work or higher directives (Aoki, 1991). In case of failure of facilities or failure, the worker should not intervene. He has to call a technician or an experienced repairman. As for the internal organization of the firm, it consisted of many basic units dedicated to specific functions (administrative and operational), each linked to another either above or below it.

The upper unit directly directs the work of subordinate units. The organization of production across the company aligns with this principle. It's not the machine or the workshop is the unit of work, but all workshops or hinged on an integrated upstream to downstream workflow (Stroobants 1993) factories. As for the screening process, it is provided by a series of hierarchical ranks to oversee the work of lower ranks. It retains an additional extension coupled with a strong demarcation between designers working methods and implementers levels. The workers had, as such, no control over the production process.

In response to the conflicts that resulted in such a labor organization, were proposed increases in salaries and / or benefits. The objective is to financially compensate repetitive, monotonous and unstimulating. Thus, the Fordist wage compromise combines acceptance of rationalization and mechanization and institutionalization of a wage formula guaranteeing productivity of living more or less in line with the dynamics of productivity (Boyer, 1993). The fixing of wages is established rigid rules, the result is to

ensure a gradual increase in the real wages of employees (Coriat, 1990). As for becoming unemployed, it is marked by great flexibility in the sense that the company can proceed without delay to the dismissal adjust staffing to workload of the company. It should be remembered that American workers are the only ones who can be dismissed without notice. Moreover, the United States is the only country where there is no right of exceptional absence for illness, and where it does not exist either income guarantee in case of bankruptcy of the company (Bowles et al., 1986).

4.3 The Japanese model

The Japanese model has its origins in the period before World War II. At that time, the Japanese company was characterized by the predominance of a classical hierarchy and used a relatively simple technology (Aoki, 1995). This situation is amplified during WWII generating a significant deficit in terms of skills and means of production. Frequent employee absenteeism was managed by an ad hoc allocation of jobs and turnover within groups. Emergencies (failure of the means of production, loss of supply) were managed on an individual basis and without any organization or prior to departure. Thus, the ad hoc working group response to these emergencies in the workplace was spontaneously developed with the support and encouragement of managers (Aoki, 1995).

Therefore, the principles of work organization based on the production flexibility and continuous improvement of the production process. The assignment and organization of tasks rely, initially, on the approach of production (Marsden, 1999) where companies are trying to expand the skills of employees and counter the rigidity of positions. These principles include:

- A highly adaptable workforce and diversified training (depending on business needs) where the fluidity of the division of labor among workers in their work group. This leads to a sharp technical skill on the part of operators. Appears, and the collective dimension of work and responsibility at work: predominance of group spirit, sharing of knowledge, information flow. Thus, the assessment of individual performance becomes a collective nature.

- A slight distinction between the functions of production, control and maintenance: This involves participation of operators to technological improvement, the proximity of supervisor, team leader and operators and sharing of expertise. We find, finally, communication, dialogue, and exchange of knowledge.

The job is based on the rotation of tasks (production, maintenance, quality control, production management) and at the same time on the rule of the working group on the individual. Lot of analysis and research on the workplace in Japanese companies specify that jobs involve high levels of collaboration and cooperation (Dore, 1973). The organization of production is based, moreover, on a hierarchy based on a ladder system. The hierarchical level is used as an incentive for employees to master techniques and develop skills relevant to the work organization. A complex set of rows gives more opportunities for employees to build their careers and move regularly in the hierarchical structure and this in the same company (Cole, 1979 and Clark, 1979).

Thus, an employee required to Japan's potential seems to be defined by the degree of effectiveness in the horizontal coordination, the possibility of providing a specialized function and understand all the functions in which each employee may be involved directly or indirectly, by the interest in the training organized by the firm, and finally the ability to work in a group and to work with its members. For successful engagement and commitment of employees to the objectives of the company, the employer deduces incentive tools.

The organizational and functional logic retains a policy of incentives, monitoring and sanctions which is as follows:

- The operator receives a salary considering its functional classification. The importance of the size and the collective aspect that attitude and cooperative spirit are valued and rewarded. This collective dimension also implies a specific form of control. It is not always intense but should be effective and continuous.

- Requirements versatility imply otherwise, reward valuing the acquisition of new skills. Added to these benefits in line with the socio-cultural context.

In addition, the company invests heavily in staff training and transmission of internal values that govern its organization. Thus, it designs its management strategy in order to retain its human capital. Appears weight and importance given to seniority in the system of promotion and therefore salary increase (financial valuation of years of service). The pension system (Japanese) because the employee attaches great importance to the sum granted to him by the firm at the end of service. Final awards are for this purpose, determined by years of service. Another point is highlighted in this strategy is the reason for leaving can in case of voluntary departure negatively affect the premium.

The employer deducts in against part of this control policy allowing him to punish those who fail to adhere to the internal policy and ensure the productivity and expected performance. Tight control is then exercised by leaders and coaching directly through assessment practices. The incompleteness of the contract on the labor market combined with collective bargaining and sometimes individually. Low-productivity, employees also remain confined to the same level - so no promotion - regardless of their seniority level.

5. Conclusion

The purpose of this article was to explain the relationship between the principles of work organization and incentive instruments. It started with a theoretical examination of the components of economic organization. We specified, relying on the economic literature, the employer is obliged, first, to define a principle of assigning tasks to employees and their combination. With a given organizational structure emerges an internal hierarchy that determines the decision-making power, responsibility and autonomy of each component of the workforce. This hierarchical structure also determines the control process and its various components. The employer is forced to supervise the work of employees or they will be tempted to diminish their level of effort. Finally, the employer has to ensure the support of its employees to the organizational structure and to identify with its objectives.

For that, we examined specifically the different incentive instruments available to employers in motivating their employees. In considering the interdependence of the principles of work organization and the incentives our attention focused on the relationship between the logic that governs the grouping of tasks within a firm and (incentive, training and communication) instruments available to supervisors to encourage employees.

We emphasized the multiple forms of complementarity between the tasks and, in particular, three different forms of complementarity: production complementarities, training complementarities and incentive complementarities. Each one refers to a particular aspect of the labor relation. We examined subsequently, the various tools available to managers to encourage employees to work. Since each instrument is characterized by a signal which varies with the quality of the task, an optimal contract can be determined for each task referring to a specific combination of these instruments. However, different types of complementarities between tasks do not, by themselves, achieve an optimum effort level. They must thus be modified to take into account interactions between different tasks. The composition of jobs - so the types of tasks grouped into a job - also determines the way in which contracts must be adjusted.

The first relationship between the organization of jobs and type of contract is superseded by the interaction that may exist between different jobs. Since the tasks (constituting different jobs) may have complementarities, the organization of the firm - and thus the contracts offered to employees - will vary depending on the interaction that exists between the type of complementary tasks forming a job and the type of complementarity that characterizes the tasks assigned to two different jobs.

Furthermore, we showed that a range of contracts may emerge in relation to the different combinations of tasks and complementarities. We indicated, moreover, that in some cases the incentive instruments, strictly speaking, are pushed aside to give way to a policy of training and communication between management and staff. Our theoretical analysis reveals, finally, two cases which affect the value of the firm independently of incentive instruments: a case of neutrality and a case of absolute value reduction.

In a last section, we studied the empirically observed firm structures and organizational principles in different countries, emphasising how jobs and tasks have been organized in these countries along different guiding principles. In future work, we will look more closely at the institutional environment, such as vocational training and education systems or

provisions in the labour law to analyse in more detail their impact on the organization of work.

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Gian Cesare Romagnoli*

A UNIFIED APPROACH FOR THE DEVELOPMENT
OF THE SOUTH OF ITALY

Abstract

The South of Italy (hereafter Italian Mezzogiorno or simply Mezzogiorno) is an outstanding example of conditional convergence in productivity. In the last forty years the policy incentives have produced no catching up of the South per capita income which still equals 60 per cent of the rest of the country. The relevant theoretical and empirical novelties emerged in the literature of the last ten years have regarded the joint effects on productivity of investment in R&D, innovative systems and spillovers. But productivity, as well as governance, are not the main issues here. It is argued that the real change which may enhance the development of Mezzogiorno asks for a fully fledged unified approach based on a twofold change of policy. It should be based either on the fulfillment of adequate “social filter” conditions aimed to remove the obstacles responsible for too long of the missed opportunities of Mezzogiorno’s development or on the design of an incentives structure aimed to fight the local unemployment by reinforcing the competitive supply of goods and services locally produced.

JEL CLASSIFICATION: R1; O1.

KEYWORDS: GENERAL REGIONAL ECONOMICS; ECONOMIC DEVELOPMENT; TECHNOLOGICAL CHANGE AND GROWTH.

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1. Introduction

In the last forty years there has been no per capita income convergence between the Mezzogiorno and the rest of the country. Only the Total Factor Productivity (TFP) has converged because of the increased weight of production out of sectors with relevant economies of scale and local employment reduction. Even the most pregnant political choice of the last ten years, the Italian adhesion to the European Monetary Union (EMU) was unable to keep up with some beneficial expectations in spite of the public debt service reduction, via the decline of the interest rates, which restored the financial credibility of the government until 2008. The EMU membership could also entail the end of dependency for the Mezzogiorno economy, easy public spending, productive sectors protection from national and international competition, abnormal relations between political and economic decisions (Centorrino, Ofria, Farinella, 2010). Contrary to the new vulgata a minority of economists held that the loss of exchange rate policy to compensate for asymmetric shocks would have requested an adequate factor mobility and wage-price flexibility (Romagnoli, 2013a). Within the last five years period, the Italian economy has faced two subsequent recessions and the crises have highlighted the economic decline which had been under way for much longer (Romagnoli, 2006). The internal constraint given by the huge public debt has certainly limited fiscal policy measures after the loss of monetary and exchange rate instruments. The actual economic situation accounts for the renewed attention to the use of regional policy instruments. Therefore it is useful to consider the progress made there either on some theoretical and empirical issues or on the long-standing questions of the Italian economic dualism characterized by deep and frequent changes which have also entailed changes in the base-lines of regional economic policies (Viesti, 2011).

This essay is divided into two sections. The first one (par. 2-8) reports the main progresses achieved in regional economics with reference to the separate and joint contributions that investments in R&D, infrastructures, human capital can give to regional development in a world which has not become flat yet. The second section (par. 9-11) concerns the revision of the base lines of regional policy in Italy according to a unified approach with specific attention to the unemployment and the supply capacity of the

underdeveloped areas of the Mezzogiorno, once that the proper development paradigm has been defined.

Section 1

2. Ten years ago

Ten years ago, the debate on the development policies aimed to the backward areas of the Italian Mezzogiorno concluded in favour of more infrastructure investments which were supposed to foster endogenous processes. Empirical research results for the Italian regions gave evidence of significant positive correlations between infrastructure endowment and local development after accounting for the negative effects of the fiscal measures which were necessary to finance it (Di Palma e Mazziotta, 1998; Ofria, 2002). However, the literature had extensively analyzed also the role of knowledge, technology and human capital in the development process (Mariani, 2001a). In particular, the link between technological change and economic growth had been explored in the European countries, thus offering answers to three questions: a) the geographic distribution of wealth and of innovation capacity (here the result was that both tended to concentrate thug the first more than the second); b) the role of regional productive specialization and diversification on the rate of change of per capita growth (here the interesting result was that the correlation coefficient was negligible for both); c) the relation between the rate of change of regional growth and the endowment, either economic or technological (here the result expected was the convergence towards the mean), but this result was never achieved. Moreover it came out that, the openness of the regional markets was positively correlated with their rate of growth. In conclusion, regional policies had a role to play in order to favour regional economic development via scientific and technological progress and the associated external economies. None the less a cumulative growth process was difficult to trigger in practice as well as the application of rules aimed to create competitive local areas. The reasons given for this situation were the following: agglomeration is fortuitous and growth is path dependent therefore to have success is not an easy task. Some conditions could favour agglomeration, like creation and prosperity of the local business community, better infrastructures , human capital accumulation, facilities for knowledge diffusion but they were difficult to be locally achieved and the EU

intervention policies aimed to foster local endogenous growth and technological change did not find a breeding ground in the Mezzogiorno (Mariani, 2001b).

3. The world has not become flat yet

The point that the world has become flat was argued by Thomas Friedman (2005) with the expansion of trade, the internationalization of firms, the galloping process of outsourcing and the possibility of networking. On the contrary, with the rise of the New Economy, economic inequalities have been increasing spatially, including the emerging digital divide, as a result of regions attracting talented workers instead of developing skills at a local level. Despite increasing inter-connectivity through developing information communication technologies, the contemporary world is still defined through its widening social and spatial divisions, which are increasingly gendered. Danny Quah (2009) explains these spatial divisions through the characteristics of knowledge goods in the New Economy: goods defined by their infinite expansibility, weightlessness and non rivalry. These divisions in the new economy are much more difficult to overcome as a result of few clear pathways of progression to higher-skilled work. Moreover, in this supposed 'flat world' the individuals should have been empowered and better off. But Crescenzi e Rodriguez-Pose (2008a) have challenged this view of the world by arguing that not all territories have the same capacity to maximize the benefits and opportunities and minimize the risks linked to globalization, warning that numerous forces are coalescing in order to provoke the emergence of urban 'mountains' where wealth, economic activity and innovative capacity agglomerate. Therefore, the "end of geography" (O'Brien, 1992), as well as that declared for history by Fukuyama(1989), has not appeared yet because capital, financial and industrial flows still have political 'boundaries'. Furthermore, there is evidence that, instead of empowering the individuals, globalization empowers large firms, regardless of whether they are North American, European, Indian or Chinese. The powerful tectonic forces linked to globalization, especially multinationals firms, are shaping a world where there are winners and losers. In addition, some economies have remained marginal in the world economic panorama.

4. R&D investment and productivity

In order to escape negative allometry and marginality, Governments in modern economies devote much policy attention to enhancing productivity and continue to emphasize its drivers such as investment in R&D (Coccia, 2009). This is thought to be the key to sustained productivity and technology improvements that are becoming more and more necessary to modern economic growth. Economic analysis shows that productivity growth is a concave function downwards due to diminishing returns to research investments. Econometric analysis shows that more than 65 per cent of productivity growth variance is due to its dependence on R&D gross domestic expenditure expressed as percentage of GDP. In short, *ceteris paribus*, the underlying political economy of growth that should be adopted to boost productivity gains in the long run and therefore competitive advantage of open nations, under stability of socio-economic-financial systems and low public debt, seems simple at first glance: raising the long run R&D investment as percentage of the GDP in the range of 2.3 to 2.6 per cent. But it is likely that the inverse be true i.e. that only countries which grow steadily can afford to spend that percentage in R&D.

5. Infrastructures and regional economic growth

Crescenzi e Rodriguez-Pose (2012) have recently revisited also the question whether transport infrastructure endowment across regions of the EU be a fundamental determinant of regional economic growth and territorial cohesion. Their results indicate that infrastructure endowment is, beyond a given threshold, a relatively poor predictor of economic growth and that regional growth in the EU results from a combination of adequate ‘social filter’ conditions¹, good innovation capacity, both in the region and

¹ The ‘social filter’ conditions refer to three aspects of the social structure: educational achievement, productive employment of human resources, demographic structure and dynamism. It is a combination of social and structural conditions in every territory, which allows development to take place (Crescenzi and Rodriguez-Pose, 2013). This approach recalls the need for “Social Capabilities” emphasized by Moses Abramovitz (1986) in order to benefit from catch-up growth. These included an ability to absorb technology, attract capital and compete in the global markets.

in neighbouring areas, and a region's capacity to attract highly qualified migrants. Hence, in times of scarce availability of public resources, there may be a need to rethink the role allocated to transport infrastructure in development policies, linking it more to more integrated and inclusive development policies based on human capital and innovation, in order to guarantee not just greater and better returns from public funds, but also a greater sustainability of the development effort. Also Del Bo and Florio (2012) have examined the return to infrastructure in the EU regions in a spatial framework, reaching results which partially contrast with the previous ones. Their conclusion, infact, highlights the importance of directing public investment to specific disaggregated categories of infrastructure, particularly those with higher returns, which are associated with telecommunication, quality and accessibility of transportation networks, with a positive impact of roads and railways.

6. Innovation systems and regional development

Innovative economic systems do not only have a national dimension (Capellari and Monte, 2006), their concentration in limited territorial areas is apparently confirmed by data and this issue has become central to the economic debate (Capellari, 2006). Anyway the analysis of regional strenghts and weaknesses has shown the importance of labour market flexibility, the sectoral concentration of innovative activity, the presence of anchor tenants (like growth poles, specific types of business activity, universities, research laboratories, etc.), the role of external and multinational corporations. A synthesis of the actual theoretical thought in the European context is given by three main analytical aspects which are intertwined. The first one regards the theoretical debate where two different microeconomic approaches compete: the traditional neoclassical one with its postulates of scarcity and rational agents maximizing their individual welfare and that of innovative systems close to evolutionary economics which focuses on the non-equilibrium processes that transform the economy from within and their implications². For the former approach, economic

² From these approaches two new economic geographies have originated. One is characterized by sophisticated spatial modeling which seeks to explain uneven development and the emergence of industrial clusters out of economies of scale. The other does the same though emphasizing relational, social, and contextual

development is a convergence process to the stationary state while for the latter it is a transformation process also related to the institutions behavior. Endogenous growth models assign a key role to human capital and to knowledge accumulation which include knowledge capital and knowledge spillovers among the determinants of economic growth. The relationship between knowledge and innovation has been elaborated according to the schumpeterian tradition modeling, on the one hand, how the firms which invest in R&D produce innovation and, on the other hand, how the new firms turn actual knowledge into an economically relevant one. In practice, according to the first approach, the economic policies which are relevant for growth are the investments in research and human capital together with a wider set of local policies aimed at reducing the gap between knowledge and economic knowledge and to foster entrepreneurship. The systemic aspect of the innovative process is explicitly considered by the second approach which assumes that positive economic results are not only ascribed to the firm but also to the combination of economic agents and the relationships which rest on the territory, in particular to the institutions activities (market regulation, school system, labour market flexibility, etc.). Therefore the winning strategies consist of either the innovation support or the measures aimed to change the context, in addition to basic research, educational labour policies, market regulation, the creation of network and cooperation links among the economic agents. Knowledge flows among the agents engendering spillovers which design the areas where innovation concentrates. They are made possible by the physical proximity of firms, public research centres, universities, links among research fellows even though these last ones are not necessarily tied to the territory but to knowledge networks. There are two kinds of spillovers depending on whether they occur within the same industry (MAR spillovers³) or not (Jacobian spillovers⁴). The results of

aspects of economic behaviour, particularly the importance of tacit knowledge. Differently from explicit or codified knowledge, which is generally found in documents, tacit knowledge refers to non codified and often personal experience-based knowledge.

³ MAR is an acronym for Marshall-Arrow-Romer. Under the MAR spillover view, the proximity of firms within a common industry often affects how well knowledge travels among firms to facilitate innovation and growth. The closer the firms are to one another, the greater the MAR spillover.

empirical studies on the European regions confirm the importance of geographic concentration of the innovation activity. In fact spillovers tend to decay significantly with distance and are stronger among areas with similar or complementary productive specializations. The second analytical space concerns the methodological questions about public policies evaluation but adequate answers to this problem request, as they did for the old “shift and share” and “quotients” theories, to estimate what would have happened without the public intervention. Finally, the third aspect concerns the analysis of the recent data on innovation in Europe. The role of industrial clusters in stimulating regional innovation and economic cohesion in Europe has been investigated by Borghi, Del Bo and Florio (2010). They conclude that the presence and the size of clusters significantly enhance regional innovation in Europe; however, the industry in which the regions specialize matters. In particular, specialization in medium-high and high-technology clusters seems to create a better environment for innovation and R&D. But here a paradox arises. In fact, while innovation is widely recognized as a driver of economic growth and societal well-being benefits from innovation, as well as individual firms, companies experience the highest barriers when they try to exit their condition of non-innovators (Cefis, Ghita and Sabidussi, 2009) and, since the probability of success is very low here (Cefis, 2003), non-innovative companies tend to remain in their current status. Although innovation is essential to build a competitive advantage and survive in the long run, some firms choose to exit (Cefis and Marsili 2011), through mergers and acquisitions (M&As), or radically change their business portfolio and identity (Cefis e Marsili, 2012).

7. Innovation systems and regional development

In theory, localization of economic activities is a manifestation of two closely-related economic phenomena: the specialization of geographical units and the spatial concentration of industries (Cutrini, 2009). The EU strategy for innovation has given evidence to the change of governance

⁴ Under the Jacobs spillover view, the proximity of firms from different industries affect how well knowledge travels among firms to facilitate innovation and growth. This is in contrast to MAR spillovers, which focus on firms in a common industry. The literature is inconclusive as to whether Marshallian specialization or Jacobian diversification externalities prevail in favouring regional innovativeness.

which has taken place in the last twenty years period within the European community (Nicolli and Maini, 2011). Initially the EU considered innovation as a linear process occurring inside the firm in a separate way, as into a black box. This concept has gradually evolved and innovation is now considered a learning process geographically delimited which involve many actors inside and outside the firm (institutions, firms, universities). This new idea of innovation shifts the policy-maker attention on territories more and more identified with the regions which have therefore become the strategic units of industrial policies aimed at countries competitiveness and growth. The development of innovative regional policies has flourished with the financial support made available from the European Union (EU). Without this help finalized to research and technological change promotion the backward regions would possibly suffer even deeper disparities within Europe and vis à vis United States and Japanese local economies. This support, though, is utterly unable to start an adequate innovation process. Furthermore the results of the European Cohesion Policy (ECP) remain somehow ambiguous since they appear to be relevant only in the internal studies of the Commission. Now the two year guillotine on the funds utilization will penalize the regions with slower spending ability. Having this in mind it is interesting to investigate the coherence of the allocation of the Structural Fund to the regions with the principle of territorial concentration (Crescenzi, 2009). This mechanism, rather than the nature of the policies implemented within the EU regional policy framework, might have led not only to an insufficient territorial concentration of the expenditure, but also to an insufficient correlation between the funds and the set of socio-economic conditions that are shown to be responsible for hampering the economic success of many EU regions. The empirical analysis shows that, due to either political equilibriums or inaccurate assumptions about the most cost-effective allocation of the funds, the sources of structural disadvantage are more spatially concentrated than the funds devoted to compensating this disadvantage and reveals a weak association between socio-economic disadvantage and EU funding. Therefore, corrections in the allocation mechanisms are recommended in order to increase fund concentration and earmark resources more adequately to disadvantaged regions. In conclusion, the discussion of the implications of the potential benefits of a more effective operation of the principle of territorial concentration should not hide the crucial importance of the regional policy implemented. An increase in the territorial focus of the financial resources, by channeling more

resources to the most disadvantaged regions, does not necessarily imply, *per se*, an increase in their capability to converge (as the standard neo-classical framework would suggest). An increase in the Structural Funds' focus on more socioeconomic disadvantaged areas needs to be matched by appropriate actions for the reinforcement of their local governance and translated into tailor-made local policies able to tackle the sources of structural disadvantage of each individual region in particular with respect to the challenges posed by the knowledge-based economy. While manufacturing employment trickled down among regions, after the completion of the European Single Market a slight agglomeration occurred, but only across national boundaries (Cutrini, 2010). There is evidence of an increasing polarization of the North–South divide closely connected with the growing concentration of high-technology sectors. It is usually considered that specialization in knowledge-intensive industries is growth-enhancing since innovation and technical progress are critical determinants of productivity improvements and international competitiveness. However, the increasingly uneven distribution of innovative activities across North and South Europe may, by itself, exacerbate regional disparities. Moreover, for the period 2007–2013, ECP included the goals of the Lisbon Strategy to foster regional growth and competitiveness through investment in innovation. These policy directions have been highly important to attain higher efficiency, but they might also have deepened further the existing differences between Northern European industrial structure and the Mediterranean one. A new core–periphery pattern besides the North–South divide is emerging whereby Northern Europe is specialized in high-technology industries and Southern Europe in labour intensive industries. The former have more suitable specialization patterns than the latter to seize the development opportunities provided by the European Regional Policy. In the New Economic Geography framework a causal link is established between international integration and the location of economic activities. The empirical facts reported here show that localization has followed an unexpected path contrary to the one suggested by this theory, in favour of Paul Krugman's polarization hypothesis (1991).

8. A unified approach to regional development

The ability of the model of “sustainable economic growth” put forward by the Lisbon Agenda to deliver its benefits evenly to the EU regions depends essentially on the capacity of each region to produce and access innovation (Crescenzi e Rodriguez-Pose, 2009). In this context the uneven geographical distribution of R&D activities was regarded as a crucial source of competitive advantage for some areas and therefore the drive of R&D investment has become a key ingredient of EU regional development policies in order to promote the “knowledge-based” economy. These policies have been mainly focused on various forms of support for R&D activities not only for the “production” of new knowledge but also for the economic exploitation of existing knowledge. Relevant insights into the role of institutional and socio-economic contextual factors for the production of economically successful innovation have produced the idea of “innovation prone” and “innovation averse” societies (Rodriguez-Pose 1999), which also plays an important part because it influences the extent and the effectiveness of the diffusion of (un-codified) knowledge. In fact, more than the reaching of the expenditure threshold, it determines the capacity of the local population to assimilate whatever research is being generated locally or in the neighbouring regions and transforms it into innovation and economic activity matters. This piece of evidence has important regional policy implications. When innovation is recognized as the key source of sustained economic growth, the mechanics of its contribution to economic performance becomes crucial for effective policy targeting. Policies based on innovation may deliver, at the regional level, very differentiated results, according to the possibility of simultaneously benefiting not only from internally and externally produced knowledge spillovers but also from favorable underlying socioeconomic conditions. Therefore, we can imagine two alternative strategies for the development of lagging, less innovative areas. The first strategy has the objective of increasing the innovative competitiveness mainly by increasing R&D activities and expecting contextual conditions to adjust autonomously. However, the empirical evidence suggests that detachment of innovative efforts from social filter conditions may severely hamper the growth-enhancing impact of innovation-based policies. The second strategy is to address social-filter conditions and stimulate innovative activities jointly. In less innovative regions, complementary policies are necessary in order to simultaneously address the

underlying social filter conditions. Incentives for local innovative activities have to be complemented by reinforcing the local endowment in terms of education and skills in order to guarantee the greatest returns from policies based on R&D. Research on the impact of innovation on regional economic performance in Europe has fundamentally followed three approaches: a) the analysis of the link between R&D investment, patents, and economic growth; b) the study of the existence and efficiency of regional innovation systems; and c) the examination of the geographical diffusion of regional knowledge spillovers. These complementary approaches have, however, rarely been combined. Important operational and methodological barriers have thwarted any potential cross-fertilization. Crescenzi e Rodriguez Pose (2008b) have tried to fill this gap. The empirical results highlight how the complex interaction between local and external research, on the one hand, with local and external socio-economic and institutional conditions, on the other, shapes the innovation capacity of every region. They also indicate the importance of proximity for the transmission of economically productive knowledge, as spillovers are affected by strong distance decay effects. The capacity to innovate and to assimilate innovation have regularly been considered as two of the key factors behind the economic dynamism of any territory. The approach, associated with evolutionary economics, concentrates on the study of territorially embedded institutional networks that favour or deter the generation of innovation. The capacity of these networks to act as catalysts for innovation depends, in turn, on the 'social filter' conditions (Rodriguez-Pose, 1999). In terms of innovation, a region can rely on both internal and external sources of innovation, but the socio-economic conditions in order to maximize the innovation potential of each region are necessarily internal, as socioeconomic conditions in neighbouring regions do not have any substantial impact on local economic performance. R&D investment in core regions, which benefits from both a location and social filter advantage, is overall more conducive to economic growth owing to its impact on both local and neighbouring regions' performance. Conversely, in peripheral regions investment in R&D may not yield the expected returns. The limited R&D investment capacity of regions in the periphery, their inadequate social filters and their lower exposure (because of their geographical location) to R&D spillovers are likely to undermine the R&D effort conducted within its borders. This does not mean that it is not worth investing in innovation in the periphery. While investing in promoting innovation is likely to remain a key factor for the development

of peripheral regions in Europe, these sort of policies will need, much more than in the case of core regions, to be complemented by policies specifically aimed at tackling the local social and economic barriers that prevent the generation and the reception and assimilation of innovation. This fundamentally implies developing policies targeted at improving education, training and skills, in order to guarantee not only greater returns from any innovation effort, but also – and perhaps more importantly in these environments – a better assimilation of knowledge spillovers generated in neighbouring regions and a better transformation of innovation into economically productive activities. And still it may not be enough, a more fully fledged unified approach may be needed.

Section 2

9. Alternative development paradigms of a development policy for the Mezzogiorno

Neither policies nor indicators of their effectiveness are just technical. Hence GDP, which is a well known and widely appreciated indicator is just asequitur of a theoretical paradigm which sees production of goods and services as a measure of well being and economic growth. Beside this paradigm, which is basic to several economic theories (neoclassical and monetarist, keynesian and Marxist, etc.), we briefly recall other two paradigms highlighted in the history of economic ideas. The first one, associated to basic needs, maintains that economic growth leaves the problem of poverty unresolved. The second one refers to Human Development which derives from Sen's capability approach. The choice of the reference paradigm is important either for understanding the reasons of regional development disparities or for designing the measures aimed to compensate them (Monni, 2013). The neglect of the growth paradigm in an open economy would likely entail negative impact multipliers greater than those associated to severe austerity measures from their opponents. These aspects are to be carefully evaluated together with the economic policies to be implemented also considering that the critique of the Environmental Kuznets Curve (EKC) has argued that economic growth leaves the global environmental problem unresolved (Stern, 2003). Investigation into the EKC and green convergence tries to detect whether empirical evidence exists to sustain the idea that economic growth can be decoupled from unwanted

environmental side-effects (Bimonte, 2012). Some scholars have used this empirical evidence to go back to the Beckerman (1992) conjecture that what we need is economic growth alone. However, it is now clear that economic growth is not a panacea for environmental quality; indeed, it is not even the main issue (Arrow et al., 1995). Moreover, the empirical evidence is not clear-cut: the EKC and the green convergence hypotheses only apply to a selected set of pollutants and countries. Infact, one of the main criticism to EKC is that the more a country develops, the more is capable to export its pollutants. Therefore it would be wrong to take the EKC hypothesis as universally valid and the growth paradigm has alternatives.

10. Policy lines for the Mezzogiorno

Regional Economics still maintains that infrastructures and public, as well as traditional, services are strategic factors for the development of backward areas and that external economies, together with production and transaction costs, represent the real preconditions for the competitiveness and the growth of the firms. From this conclusion it arises that the economic policy national and local priorities should insist on across the board elements and external networks for enhancing productivity. But it is important that adequate underlying social filter conditions are necessary for the stability and the sustainability of the entrepreneurial framework in the local economic systems. As regards the relationship between public spending and regional growth in Italy in the period 1996-2007 the results suggest that, in the period examined, a phase of σ -convergence and β -convergence in productivity took place (Daniele, 2009). When the entire sample of twenty regions is considered, no correlation between capital expenditure and productive growth is found. When the sample is split into Northern and Southern regions, only in the first group of regions, in fact, a significant, positive relationship between expenditure for development and growth can be found. The existence of differences matters, not only in the amount of financial resources devoted to the North and the South of Italy, but also in the efficiency of their allocation (Daniele, 2009). The inclusion of human capital in the specification of regional economic growth, besides downsizing the role of TFP, shows that human capital accumulation has significantly contributed to economic growth especially in the Southern regions. In brief, from 1980 to 2004, the Italian regions have experienced a convergence process of labour productivity while no convergence took place for the per

capita income levels. The factor components accounting for the variance of per capita incomes show that the divergent trend of these two variables is due to the divergence of the own regional employment rates (Daniele, 2008).

As far the Mezzogiorno is concerned, its economic results are still very disappointing: one third of the Italian population lives there producing one fourth of GDP, the gap of per capita income with the rest of the country has remained unchanged in the last forty years, it shows no convergence to the contrary of other European economic dualisms, it is the widest and most populated backward area of the Eurozone, its migratory flows are relevant especially among qualified young people, the change is too slow there, it holds the lowest activity rate in Europe with regard to young people and women, one fifth of the workers are still illegal (more than double of the rest of the country), its international integration is low (excluding oil refining it represents less than 10 per cent of its exports). The crisis has passed its effects also to the Mezzogiorno where outsourcing demand has gone down, payments have been delayed, credit access has worsened, organized crime has augmented its weight in the public administrations tarnishing the citizens confidence, preventing the operation of competitive markets, increasing the costs of economic and civil life (Romagnoli, 1990). In the 2nd After War period, relevant mistakes have been done in the Mezzogiorno, either at micro and macroeconomic level (Romagnoli, 1989), and several sound lessons of economic policy have been overlooked. The reference here is to those thought, at the beginning of 1950s, by Pasquale Saraceno (1980) on the preference to be given to supply rather than demand policies for the South, by Guido Carli (1996) in favour of wage policy dismissed from the slogan "the wage is an independent variable", by Augusto Graziani (1979) on the necessary safeguard of the interaction between small and big business, by Carlo Del Monte and Adriano Giannola (1978) on the incentives structure related to the exporting capacity of the firms, by Salvatore Cafiero and Riccardo Padovani (1990) on the importance of the economies of scale. These disattentions have prevented the sustainability and the durability of the economic convergence. The results of the new model of the ordinary development policy intervention focused on services and rights targets like: security, justice administration and education investments, for a better quality of life in the South, are still controversial (Viesti, 2011). It has recently been observed that the Italian Mezzogiorno is a peculiar case of persistent failure to thrive vis à vis the rest of the country. Its gap, which has remained almost constant over several years has given rise to a case of

conditional convergence (Canale, 2011). In Italy the territorial dualism experienced a reduction only between 1950 and 1970 (Romagnoli, 1989). In the Mezzogiorno, the scarcity of human capital, R&D investments, education, etc. is supposed to have depressed the productivity and the introduction of innovation. Even the institutions, either the formal or the informal ones, have had a central role in depressing the productivity dynamics. Whenever they, starting from the Central State, are unable to carry out their main function i.e. minimize transaction costs (North, 1990), also end up weakening step by step the underlying economic conditions of the area. This consideration reminds that economic efficiency implies the minimization of both production and transaction costs. The conventional wisdom shares the basic idea that the Italian Mezzogiorno has followed the development of the rest of the country, though with a slower path. Only recently some scholars have explored the opposite question i.e. the reciprocal economic relationship between the two areas; in other words, they wondered whether looking at the Mezzogiorno as a slowing down reason for the more productive part of the country is a fallacy. To answer this question, De Bonis, Rotondi and Savona (2010) have measured the resources which have flown from the Northern regions, in terms of public transfers, to the Southern ones as well as those which have flown in the opposite direction through the net purchase of goods and services⁵. The result is that the trade deficit of the Southern regions overcompensates the flow of transfers coming from the Northern ones i.e. the net imports from the North overcome the transfers received. Therefore, in the last sixty years period, the South has positively contributed, though less than it could, to the growth and the well being of the rest of the country.

At this point it would be interesting to know whether the lower development path of the Mezzogiorno has been a willful or unintentional

⁵ The Italian Mezzogiorno shows a large trade deficit and a specific weakness in the exchange of technology. The policy implication asks for public finance constraints and the reduction of public expenditure inefficiencies aimed at improving the current account deficit through a reinforcement of its productive structure. The ECP has channeled large amounts of resources for the development of Southern Italian regions, mainly since the early 1990s (Brasili, Bruno, Saguatti, 2012) but they were often misused. The fact that the growth paths of the Italian regions remained highly differentiated among and within the macro areas implies that the Italian economic system cannot anymore be described as simply dualistic.

outcome and, in the first case, whether it has been imposed or simply accepted, as suggested by Desmet and Ortuño Ortín (2007), who have argued that the political representatives of the Southern regions may have opted for a short period perspective. None the less the real question is different: why the financial resources which have been transferred to the South have been, at least partially, used to finance its trade deficit with the rest of the country instead of giving space to an incentive structure aimed at reinforcing the local competitive supply of demanded goods and services. The latter choice, suggested by Pasquale Saraceno, would have prevented the conservation of the Mezzogiorno's economic dependency. Socioeconomic disparity of per capita income between North and South Italy has been recently explained by Lynn (2010) as the result of a lower intelligence quotient (IQ) of the Southern population. The results of further research do not confirm the suggested IQ-economy causal link (Daniele e Malanima, 2011). Since IQ registers education and years of schooling to a greater extent than intelligence, one possible alternative explanation is that the relative position of the South compared to the North deteriorated in both the cultural environment and the economy more or less contemporaneously.

11. Conclusion

The conclusions of this essay are partly derived from a selection of the recent advancements in the literature of regional economics and the last and main one is not new. They suggest policy lines for an eventual development of Mezzogiorno:

1. productivity gains come out from R&D investments and they are enhanced by MAR and Jacobian spillovers both of which tend to rapidly decay with distance, but productivity gains are not the main issue here also because TFP convergence between Southern and Central-Northern areas, to the contrary of per capita income, has taken place through the divergence among the employment regional rates;
2. R&D investment are effective only if an adequate "social filter" operates, changing "innovation averse" into "innovation prone" societies;
3. infrastructures may still be relevant to the development of Mezzogiorno provided that they are properly selected; those in the transport sector are to be relatively downsized;

4. industrial clusters enhance development especially in science-based productions or high value added services;
5. innovation shortage, but also its successful presence, may paradoxically expose firms and lead them out of the market;
6. public capital expenditure has enhanced Italian productivity but this relationship is significant only in the Northern regions;
7. human capital contribution is significant above all for the development in the Southern regions while this does not hold for the Northern ones where it may have reached a satisfactory level;
8. the evaluation on the allocation of the European funds to backward areas remains uncertain in the empirical studies according to whether they have been internal or external to the Commission. What matters more is that the actual allocation overlooks the evolutionary approach provision which prompts to follow tailor made development policies able to tackle the sources of disadvantage of each individual region and therefore to select its best strategy leading to competitiveness and growth. But, like productivity, not even governance is a main issue here;
9. a more fully fledged unified approach should guide the change of the Italian regional policy and direct it, through an appropriate incentive structure, to fight the local unemployment and to reinforce the local competitive supply of goods and services aimed at satisfying either local or external demand. This policy, complemented by the attainment of the adequate “social filter” conditions for an innovation prone society, should be implemented in the South, as it has been done in many other backward areas in Europe and outside it.

The negative economic trend underlined from the two subsequent economic crises has stricken across Italian firms of different size (Dallara e Rizzi, 2010). The effects have been strong and pervasive, since 2009 GDP has dropped by 9 per cent. At the regional level the impact of the crises has been general but it has had a greater effect on the poorer regions⁶. The two crises have passed on their effects to the Southern regions where regional

⁶ In the South GDP fell 10 per cent in the period 2007-2012, almost double of the North where it fell less than 6 per cent. Opposite results on this issue have been reported by Dallara e Rizzi (2011). Anyway, without a change in the actual policy lines, there is little space for a recovery of the Mezzogiorno's economy.

outsourcing has declined, payments have slowed down, financial credit access conditions have worsened, organized crime has spread over. However, the real question is the real significant recovery capacity of local systems with high sustainable competitiveness. But, apparently, there are no models of local government in Italy capable to join economic competitiveness, social cohesion and environmental compatibility except for the mountain tourism systems, the industrial districts and the system of small and medium-size firms (Dallara e Rizzi, 2012). The world economy sways between complete liberalization, which is partly responsible for the international financial crisis, and two plausible threats: economic protectionism and social globalization which extends across the advanced countries the industrial relations and the working conditions of the emerging countries. A significant part of Italy is bending on itself, goes off and reacts to the actual crisis looking for individual solutions while institutions lose weight. The risk is to go back to economic nationalism in order to face external threats and criticism. One way out from the crisis is to go back to the origin, by revaluing the real economy and a long run programming capacity, by strengthening the political representation, the networks and the university-industry relations . The problem of the young unemployed leaped out in the reports is particularly serious in the Mezzogiorno. It unveils the results of a long period of time during which Italian economic policy has privileged appearance, patronizing, postponement of necessary structural and institutional changes (Romagnoli, 2013b) and finally public debt, a responsibility which no Italian political party still accepts to acknowledge and to take-charge.

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*THE RISK LEVEL OF VIET NAM ELECTRIC POWER INDUSTRY UNDER
FINANCIAL LEVERAGE DURING AND AFTER THE GLOBAL CRISIS
2007-2011*

Abstract

This paper evaluates the impacts of external financing on market risk for the listed firms in the Viet Nam electric power as it becomes necessary, esp. after the financial crisis 2007-2009.

First, by using quantitative and analytical methods to estimate asset and equity beta of total 20 listed companies in Viet Nam electric power industry with a proper traditional model, we found out that the beta values, in general, for many institutions are acceptable.

Second, under 3 different scenarios of changing leverage (in 2011 financial reports, 30% up and 20% down), we recognized that the risk level, measured by equity and asset beta mean, decreases when leverage increases to 30% and it increases if leverage decreases down to 20%.

Third, by changing leverage in 3 scenarios, we recognized the dispersion of risk level, measured by equity beta var, increases if the leverage increases to 30%.

Finally, this paper provides some outcomes that could provide companies and government more evidence in establishing their policies in governance.

JEL CLASSIFICATION: G010; G100; G390.

KEYWORDS: EQUITY BETA; FINANCIAL STRUCTURE; FINANCIAL CRISIS; RISK; EXTERNAL FINANCING; ELECTRIC POWER INDUSTRY.

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1. Introduction

Financial development has positive effect for the economic growth, throughout many recent years, Viet Nam electric power industry is considered as one of active economic sectors, which has some positive effects for the economy.

This paper is organized as follow. The research issues and literature review will be covered in next sessions 2 and 3, for a short summary. Then, methodology and conceptual theories are introduced in session 4 and 5. Session 6 describes the data in empirical analysis. Session 7 presents empirical results and findings. Next, session 8 covers the analytical results, session 9 presents analysis of risk. Lastly, session 10 will conclude with some policy suggestions. This paper also supports readers with references, exhibits and relevant web sources.

2. Research Issues

We mention some issues on the estimating of impacts of external financing on beta for listed electric power industry companies in Viet Nam stock exchange as following:

Issue 1: Whether the risk level of electric power industry firms under the different changing scenarios of leverage increase or decrease so much.

Issue 2: Whether the disperse distribution of beta values become large in the different changing scenarios of leverage estimated in the electric power industry.

3. Literature review

Goldsmith (1969), Mc Kinnon (1973) and Shaw (1973) pointed a large and active theoretical and empirical literature has related financial development to the economic growth process.

Black (1976) proposes the leverage effect to explain the negative correlation between equity returns and return volatilities. Diamond and Dybvig (1983) said banks can also help reduce liquidity risk and therefore enable long-term investment. Aghion et al. (1999) stated debt instruments can reduce the amount of free cash available to firms and thus managerial slack.

Peter and Liuren (2007) mentions equity volatility increases proportionally with the level of financial leverage, the variation of which is dictated by managerial decisions on a company's capital structure based on economic conditions. And for a company with a fixed amount of debt, its financial leverage increases when the market price of its stock declines.

Reinhart and Rogoff (2009) pointed the history of finance is full of boom-and-bust cycles, bank failures, and systemic bank and currency crises. Adrian and Shin (2010) stated a company can also proactively vary its financial leverage based on variations on market conditions.

Finally, financial leverage can be considered as one among many factors that affect business risk of consumer good firms.

4. Conceptual theories

The impact of financial leverage on the economy

A sound and effective financial system has positive effect on the development and growth of the economy. Financial institutions and markets can enable corporations to solve liquidity needs and enhance long-term investments. This system include many channels for a firm who wants to use financial leverage or FL, which refers to debt or to the borrowing of funds to finance a company's assets.

In a specific industry such as consumer good industry, on the one hand, using leverage with a decrease or increase in certain periods could affect tax obligations, revenues, profit after tax and technology innovation and compensation and jobs of the industry.

During and after financial crises such as the 2007-2009 crisis, there raises concerns about the role of financial leverage of many countries, in both developed and developing markets. On the one hand, lending programs and packages might support the business sectors. On the other hand, it might create more risks for the business and economy.

5. Methodology

For estimating systemic risk results and leverage impacts, in this study, we use the live data during the crisis period 2007-2011 from the stock exchange market in Viet Nam (HOSE and HNX and UPCOM).

In this research, analytical research method is used, philosophical method is used and specially, leverage scenario analysis method is used. Analytical

data is from the situation of listed electric power industry firms in VN stock exchange and current tax rate is 25%.

Finally, we use the results to suggest policy for both these enterprises, relevant organizations and government.

6. General Data Analysis

The research sample has total 20 listed firms in the electric power industry market with the live data from the stock exchange.

Firstly, we estimate equity beta values of these firms and use financial leverage to estimate asset beta values of them. Secondly, we change the leverage from what reported in F.S 2011 to increasing 30% and reducing 20% to see the sensitivity of beta values. We found out that in 3 cases, asset beta mean values are estimated at 0,471, 0,389 and 0,539 which are negatively correlated with the leverage. Also in 3 scenarios, we find out equity beta mean values (0,602, 0,512 and 0,664) are also negatively correlated with the leverage. Leverage degree changes definitely has certain effects on asset and equity beta values.

7. Empirical Research Findings and Discussion

In the below section, data used are from total 20 listed electric power industry companies on VN stock exchange (HOSE and HNX mainly). In the scenario 1, current financial leverage degree is kept as in the 2011 financial statements which is used to calculate market risk (beta). Then, two (2) FL scenarios are changed up to 30% and down to 20%, compared to the current FL degree.

Market risk (beta) under the impact of tax rate, includes: 1) equity beta; and 2) asset beta.

7.1. Scenario 1: current financial leverage (FL) as in financial reports 2011

In this case, all beta values of 20 listed firms on VN electric power industry market as following:

**Table 1. Market risk of listed companies
on VN electric power industry market**

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)	Note	Financial leverage (F.S reports)
1	BTP	0,840	0,357		57,5%
2	CHP	0,407	0,168	BTP as comparable	58,7%
3	DNC	-0,865	-0,270		68,8%
4	DRL	0,473	0,388	NLC as comparable	17,9%
5	DTV	0,527	0,499	NLC as comparable	5,4%
6	GHC	0,359	0,117	NBP as comparable	67,3%
7	HJS	0,699	0,200		71,3%
8	KHP	0,615	0,308		50,0%
9	NBP	0,914	0,604		33,9%
10	ND2	0,180	0,043	TBC as comparable	76,2%
11	NLC	0,550	0,510		7,2%
12	NT2	0,639	0,137		78,6%
13	PPC	0,811	0,232		71,3%
14	RHC	0,361	0,200		44,7%
15	SBA	0,177	0,062	SJD as comparable	64,8%
16	SEB	0,427	0,194		54,5%
17	SHP	0,485	0,245	BTP as comparable	49,4%
18	SJD	0,420	0,221		47,4%
19	TBC	0,612	0,568		7,3%
20	TIC	0,351	0,343		2,2%
				Average	46,72%

7.2. Scenario 2: financial leverage increases up to 30%

If leverage increases up to 30%, all beta values of total 20 listed firms on VN electric power industry market as below:

Table 2. Market risks of listed electric power industry firms (case 2)

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)	Note	Financial leverage (30% up)
1	BTP	0,840	0,212		74,8%
2	CHP	0,246	0,059	BTP as comparable	76,2%
3	DNC	-0,865	-0,092		89,4%
4	DRL	0,448	0,344	NLC as comparable	23,2%
5	DTV	0,520	0,484	NLC as comparable	7,0%
6	GHC	0,146	0,018	NBP as comparable	87,5%
7	HJS	0,699	0,051		92,7%
8	KHP	0,615	0,215		65,0%
9	NBP	0,914	0,511		44,0%
10	ND2	0,007	0,000	TBC as comparable	99,1%
11	NLC	0,550	0,498		9,4%
12	NT2	0,639	-0,014		102,2%
13	PPC	0,811	0,059		92,7%
14	RHC	0,361	0,151		58,1%
15	SBA	0,084	0,013	SJD as comparable	84,2%
16	SEB	0,427	0,124		70,9%
17	SHP	0,358	0,128	BTP as comparable	64,2%
18	SJD	0,420	0,161		61,6%

19	TBC	0,612	0,554	9,5%
20	TIC	0,351	0,341	2,9%
Average				60,73%

7.3. Scenario 3: leverage decreases down to 20%

If leverage decreases down to 20%, all beta values of total 20 listed firms on the electric power industry market in VN as following:

Table 3. Market risk of listed electric power industry firms (case 3)

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)	Note	Financial leverage (20% down)
1	BTP	0,840	0,453		46,0%
2	CHP	0,505	0,268	BTP as comparable	46,9%
3	DNC	-0,865	-0,389		55,0%
4	DRL	0,489	0,419	NLC as comparable	14,3%
5	DTV	0,532	0,509	NLC as comparable	4,3%
6	GHC	0,487	0,225	NBP as comparable	53,9%
7	HJS	0,699	0,300		57,1%
8	KHP	0,615	0,369		40,0%
9	NBP	0,914	0,666		27,1%
10	ND2	0,282	0,110	TBC as comparable	61,0%
11	NLC	0,550	0,518		5,8%
12	NT2	0,639	0,237		62,9%
13	PPC	0,811	0,348		57,1%
14	RHC	0,361	0,232		35,7%
15	SBA	0,233	0,112	SJD as	51,8%

The risk level of Viet Nam electric power industry under financial leverage during and after the global crisis 2007-2011

16	SEB	0,427	0,241	comparable	43,6%
17	SHP	0,563	0,341	BTP as comparable	39,5%
18	SJD	0,420	0,261		37,9%
19	TBC	0,612	0,577		5,8%
20	TIC	0,351	0,345		1,8%
Average					37,37%

All three above tables and data show that values of equity and asset beta in the case of increasing leverage up to 30% or decreasing leverage degree down to 20% have certain fluctuation.

8. Comparing statistical results in 3 scenarios of changing leverage:

Table 4. Statistical results (FL in case 1)

Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	0,914	0,604	0,3094
MIN	-0,865	-0,270	-0,5946
MEAN	0,449	0,256	0,1927
VAR	0,1353	0,0417	0,0936
Note: Sample size: 20			

Table 5. Statistical results (FL in case 2)

Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	0,914	0,554	0,3594
MIN	-0,865	-0,092	-0,7730
MEAN	0,409	0,191	0,2182
VAR	0,1500	0,0393	0,1107
Note: Sample size : 20			

Table 6. Statistical results (FL in case 3)

Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	0,914	0,666	0,2475
MIN	-0,865	-0,389	-0,4757
MEAN	0,473	0,307	0,1661
VAR	0,1314	0,0482	0,0832
Note: Sample size : 20			

Based on the above results, we find out:

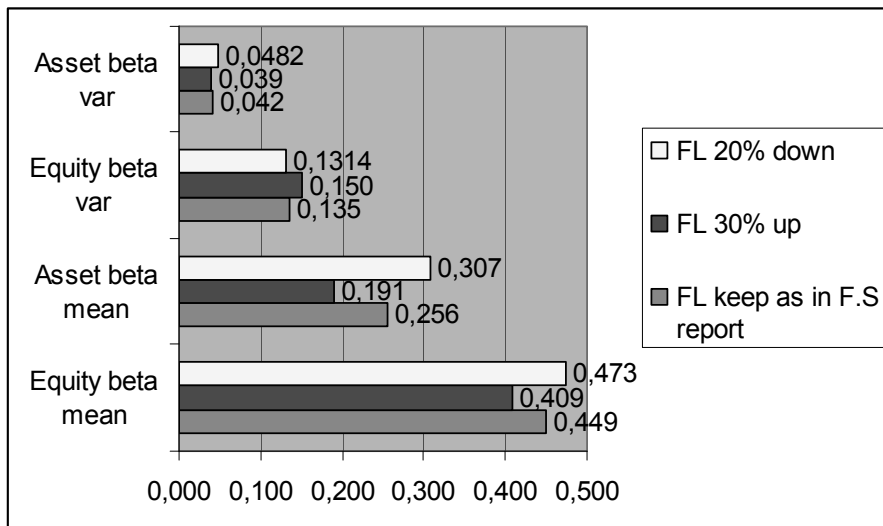
Equity beta mean values in all 3 scenarios are low ($< 0,5$) and asset beta mean values are also small ($< 0,4$) and max equity beta values are lower than ($<$) 1. In the case of reported leverage in 2011, equity beta value fluctuates in an acceptable range from -0,865 (min) up to 0,914 (max) and asset beta fluctuates from -0,270 (min) up to 0,604 (max). If leverage increases to 30%, equity beta moves in an unchanged range and asset beta moves from -0,092 (min) up to 0,554 (max). Hence, we note that there is an increase in asset beta min value if leverage increases. When leverage decreases down to 20%, equity beta value moves in an unchanged range and asset beta changes from -0,389 (min) up to 0,666 (max). So, there is a small increase in equity beta min value and small decrease in asset beta min when leverage decreases in scenario 3.

Beside, Exhibit 5 informs us that in the case 30% leverage up, average equity beta value of 20 listed firms decreases down to 0,040 while average asset beta value of these 20 firms decreases little less to 0,065. Then, when leverage reduces to 20%, average equity beta value of 20 listed firms goes up to 0,024 and average asset beta value of 20 firms up to 0,051.

The below chart 1 shows us : when leverage degree decreases down to 20%, average equity and asset beta values increase slightly (0,473 and 0,307) compared to those at the initial reported leverage (0,449 and 0,256). Then, when leverage degree increases up to 30%, average equity beta decreases little more and average asset beta value also decreases more (to 0,409 and 0,191). However, the fluctuation of equity beta value (0,150) in the case of 30% leverage up is higher than ($>$) the results in the rest 2

leverage cases. And we could note that the using of leverage in the case of 30% leverage up causes a decrease in asset beta var down to 0,039.

Figure 1. Comparing statistical results of three (3) scenarios of changing FL



9. Risk analysis

In short, the using of financial leverage could have both negatively or positively impacts on the financial results or return on equity of a company. The more debt the firm uses, the more risk it takes. Beside, the increasing interest on loans might drive the earning per share (EPS) lower.

On the other hand, in the case of increasing leverage, the company will expect to get more returns. The financial leverage becomes worthwhile if the cost of additional financial leverage is lower than the additional earnings before taxes and interests (EBIT). Considering risk vs. return, FL becomes a decisional variable for managers.

10. Conclusion and Policy suggestion

In general, the government has to consider the impacts on the mobility of capital in the markets when it changes the macro policies. Beside, it continues to increase the effectiveness of building the legal system and regulation supporting the plan of developing electric power market. The Ministry of Finance continues to increase the effectiveness of fiscal policies and tax policies which are needed to combine with other macro policies at the same time. The State Bank of Viet Nam continues to increase the effectiveness of capital providing channels for electric power companies as we could note that in this study when leverage is going to increase up to 30%, the risk level decreases much as well as the asset beta var, compared to the case it is going to decrease down to 20%.

Furthermore, the entire efforts among many different government bodies need to be coordinated.

Finally, this paper suggests implications for further research and policy suggestion for the Viet Nam government and relevant organizations, economists and investors from current market conditions.

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Exhibit

Exhibit 1 – Interest rates in banking industry during crisis

Year	Borrowing Interest rates	Deposit Rates	Note
2011	18%-22%	13%-14%	Approximately (2007: required reserves ratio at SBV is changed from 5% to 10%) (2009: special supporting interest rate is 4%)
2010	19%-20%	13%-14%	
2009	9%-12%	9%-10%	
2008	19%-21%	15%-16,5%	
2007	12%-15%	9%-11%	

Source: Viet Nam commercial banks

The risk level of Viet Nam electric power industry under financial leverage during and after the global crisis 2007-2011

Exhibit 2 – Basic interest rate changes in Viet Nam

Year	Basic rate	Note
2011	9%	
2010	8%	
2009	7%	
2008	8,75%-14%	Approximately, fluctuated
2007	8,25%	
2006	8,25%	
2005	7,8%	
2004	7,5%	
2003	7,5%	
2002	7,44%	
2001	7,2%-8,7%	Approximately, fluctuated
2000	9%	

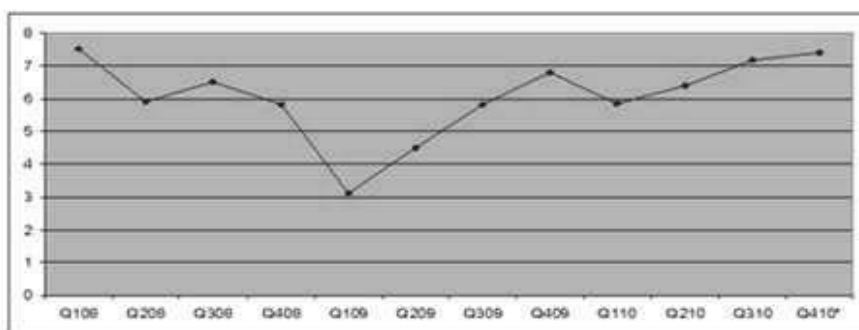
Source: State Bank of Viet Nam and Viet Nam economy

Exhibit 3 – Inflation, GDP growth and macroeconomics factors
(source: Viet Nam commercial banks and economic statistical bureau)

Year	Inflation	GDP	USD/VND rate
2011	18%	5,89%	20.670
	11,75%	6,5%	
2010	(Estimated at Dec 2010)	(expected)	19.495
2009	6,88%	5,2%	17.000
2008	22%	6,23%	17.700
2007	12,63%	8,44%	16.132
2006	6,6%	8,17%	
2005	8,4%		
Note		approximately	

Source: Viet Nam commercial banks and economic statistical bureau

Exhibit 4 – GDP growth Việt Nam 2006-2010



Source: Bureau Statistic

Exhibit 5 – Increase/decrease risk level of listed electric power industry firms under changing scenarios of leverage: in 2011 F.S reports, 30% up, 20% down in the period 2007-2011

Order No.	Company stock code	FL keep as in F.S report		FL 30% up		FL 20% down	
		Equity beta	Asset beta	Increase /Decrease (equity beta)	Increase /Decrease (asset beta)	Increase /Decrease (equity beta)	Increase /Decrease (asset beta)
1	BTP	0,840	0,357	0,000	-0,145	0,000	0,097
2	CHP	0,407	0,168	-0,160	-0,110	0,098	0,100
3	DNC	-0,865	-	0,000	0,178	0,000	-0,119
4	DRL	0,473	0,388	-0,025	-0,044	0,016	0,031
5	DTV	0,527	0,499	-0,007	-0,015	0,005	0,010
6	GHC	0,359	0,117	-0,213	-0,099	0,128	0,107
7	HJS	0,699	0,200	0,000	-0,150	0,000	0,100
8	KHP	0,615	0,308	0,000	-0,092	0,000	0,062
9	NBP	0,914	0,604	0,000	-0,093	0,000	0,062
10	ND2	0,180	0,043	-0,173	-0,043	0,102	0,067
11	NLC	0,550	0,510	0,000	-0,012	0,000	0,008
12	NT2	0,639	0,137	0,000	-0,151	0,000	0,100
13	PPC	0,811	0,232	0,000	-0,174	0,000	0,116
14	RHC	0,361	0,200	0,000	-0,048	0,000	0,032
15	SBA	0,177	0,062	-0,092	-0,049	0,056	0,050
16	SEB	0,427	0,194	0,000	-0,070	0,000	0,047
17	SHP	0,485	0,245	-0,127	-0,117	0,079	0,096
18	SJD	0,420	0,221	0,000	-0,060	0,000	0,040
19	TBC	0,612	0,568	0,000	-0,013	0,000	0,009
20	TIC	0,351	0,343	0,000	-0,002	0,000	0,002
		Average		-0,040	-0,065	0,024	0,051

Exhibit 6 – VNI Index and other stock market index during crisis 2006-2010

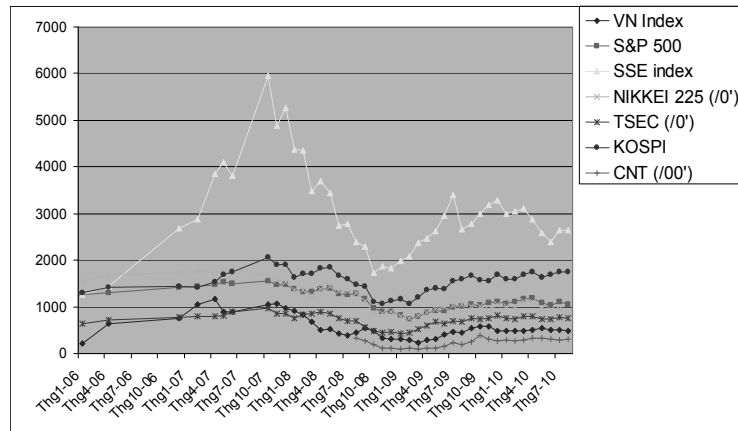


Exhibit 7 – Comparing statistical results of three (3) scenarios of changing FL of 121 listed firms in the consumer good industry

