

# Thomas Piketty's Capital in the 21st Century – an Analysis Based on Intellectual Capital

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**Abstract:** In this paper we analyze the book that was hailed by Paul Krugman and the Financial Times as the book of the Year of 2014, through the lenses of the Intellectual Capital. Published in 2012, Thomas Piketty's Capital in the 21<sup>st</sup> century became a worldwide sensation and best seller because of the depth of its analysis and the controversy created by its findings. In a nutshell Piketty claims that contrary to the neoclassical forecast, inequality in the world might grow, due to a shock between forces of convergence and forces of divergence. Furthermore, Piketty also claims that only redistribution policies can reduce the inequality trend, and calls for a new set of social policies. All this is very impressive but for us what matters the most is how to put IC in the analysis. In this context, we analyze Piketty's ideas using the concepts and theories on Intellectual Capital (Bonfour and Edvinsson 2005; Edvinsson and Malone, 1997; Kaplan and Norton, 1994), and we also recall what the main theories on inequalities are (Coleman, 1991, Atkinson 1983 or Stiglitz 2012), and about Welfare States (Esping Andersen, 1990). We find that in the history of socio-economic thought, Intellectual Capital and Inequalities have been marching in separate paths: not only the paradigms of analysis are totally different, but only a handful of empirical studies exist that bring together IC and inequalities. The fact is crucial for our paper because we believe that IC in fact increases inequality and explains growing inequality. We also found that Piketty almost does not address IC directly in his entire book, a fact that by itself speaks volumes about the position of IC in the world of socio-economic thought. Piketty's analysis, for all its importance, and novelty, is traditional and surprisingly old fashioned when it comes to considering Intangibles. He never uses IC, he seems to be unaware of IC analysis. However we also think that most of Piketty's analysis would gain strength if IC is considered (as we believe it certainly should be) as a major force of inequality in the economy of the 21<sup>st</sup> century. In the discussion of the paper we point out seven ways in which the inclusion of IC in the analysis could benefit Piketty's conclusions; the seven ideas relate to Human Capital, super-professionals, billionaires, social policies and development, taxes on wealth, modern slavery, and the rise of political oligarchies in the 21<sup>st</sup> century. The paper is of limited scope because it is basically theoretical. The paper is original because we don't know of any other previous study linking Piketty's book to IC analysis; in this context we believe further efforts should be done in this very relevant area of research.

**Keywords:** intellectual capital, inequalities, Thomas Piketty

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## 1. Introduction

In 2013, the literary and intellectual world of Economics was rocketed by the book "Le Capital iau 21eme siècle" by the French economist Thomas Piketty (Piketty, 2013). The book was widely commented and read. The author was hailed as the new Marx. The book's conclusions, in the words of the author himself, were that "we should be wary of any historical determination in the subject of wealth distribution" (Piketty, 2013, 47). Furthermore, there are multiple mechanisms in the economic world that generate convergence and divergence of wealth distribution through time. And the major factor of convergence and therefore of reduction of wealth inequalities is the diffusion of knowledge and the investment in skills and training (Piketty, 2013, 47). Two pages later the author reinforces the idea: the victory of the human capital over financial capital, and the replacement of the class struggle by the age struggle are illusions which don't lead to a massive decrease in inequality; in the long run the real driving force for inequality reduction is the diffusion of knowledge and skills (Piketty, 2013, 49).

We assume that Piketty's message has links with and is of interest to the Intellectual Capital (IC) community. Therefore the research question of the paper will be – What can be said about Piketty's book reflections on IC?

We will proceed in five stages. Firstly, we will present the main concepts used in the paper, mainly IC, inequality and Welfare States (WS) (section 2). Secondly, we will present the main theories and studies we know on the relation between IC and inequality within the WS scope (section 3). Thirdly, we summarize the mains findings of the book, from the point of view of IC (section 4). Then we discuss the books' ideas based on other known theories on IC, and other topics like income inequality and Welfare States (section 5). Finally we will draw our own conclusions (section 6), address the paper's limitations and suggest some inroads for further research.

## **2. Concepts**

### **2.1 IC**

In this paper we describe Intellectual Capital (IC) as a strategic asset of companies, nations and individuals. It is composed of human capital, relational capital and social capital, which translate easily into competences, routines and brands (Edvinsson and Malone, 1997).

IC was first included in the scientific analysis when it became apparent that there was a divergence between the book value (BV) and the market value of companies (MV). Given that the book should account for the tangible assets of the companies and organizations, IC should explain the difference between MV and BV (Edvinsson and Malone, 1997). Given the composition of IC, its management became suddenly of utter strategic importance for companies and organizations. Organizational success became not only a question of managing the human resources well, but also the relational capital within the company and the relations between the company and its direct environment (Blomqvist 1998; Bonneramn and Alwert, 2007. Kianto, 2008). Many methodologies on evaluating IC were put forward (Sveiby, 1997; Sveiby 2010) and the balance scorecard became the most popular methodology (Kaplan and Norton, 1994) in the field. Later, IC analysis was also extended to countries (Edvinsson and Li, 2011) or regions (Bonfour and Edvinsson. 2005). The underlying assumption was also that some sort of value could be derived for countries from managing HR, routines and brands. Following this path, organizations like the World Bank created the Knowledge Index Indicator (KEI) (World Bank 2014a).

Quite intriguingly, only a handful of studies have been done on individual IC (Maura and Longo, 2012, Tomé and al, 2014). The situation is a bit extraordinary because, conceptually, there is nothing that would prevent the application of the IC model to individuals; indeed, and on the contrary the use of the IC model could be as strategic for individuals as it is to organizations or to regions – a person may try to improve his or hers situation in the labor market by managing its human capital (under the form of competences and skills), structural capital (as working and living routines) or social capital (and in this case we would be thinking about the reputation of the individual).

In the context of this paper we believe individual IC is at least as important as national or organizational IC because Piketty's analysis on Capital deals with the phenomenon of inequality (see section 4 below). In fact, given that inequality is foremost accounted on an individual base we may assume that Piketty's book is directly related with individual IC. And in our opinion the relation between Piketty's analysis and organizational and regional IC is only indirect: organizational IC can be related with inequality if it increases the wealth of the owner of the company and we believe it does; national IC can also have a positive external effect on the individuals' wealth or income because it is a way of generating individual income.

### **2.2 Inequality**

The analysis of inequality is usually made starting by the idea of equality. There are three main kinds of equality – equality over the law (EL), equality of opportunity (EO) and equality of result (ER) (Coleman, 1991). Equality over the law relates to rights, and it is usually linked with positive discrimination- Positive discrimination exists when the law singles out and protects some groups in order to increase their access to good or services. Equality of opportunity is measured by relating the number of members of a group with the number of those members that perform an act; in a situation in which EO exists, all the relevant groups should have broadly the same rate of participation. Quite crucially, EL may be assured and EO may exist, some groups may have higher returns than others in the labor market or in any other relevant market – as a sign of inequality of result. Inequality of result may be addressed at its roots, by trying to improve the underlying and non-observable conditions of the non-participants: inequality may also be addressed as the results, using taxes and other forms of redistribution policies.

Inequality exists between individuals (and is called individual inequality) or between factors of production (called functional inequality). The two forms of inequality are related because the more an individual possesses a factor of share in the national income, the worse it is, and vice versa. Personal inequality has causes (Atkinson 1983 or Stiglitz 2012); the most important cause seems to be differences in education; other causes relate to inherited wealth, belonging to disadvantaged or excluded minorities, or working in problematic countries or economic sectors. Inequality is measured by indicators, the best known being the Gini Index (World Bank 2014, b) and also

the Theil Index (Ra, 1992). Statistics on the inequality have been made worldwide mainly by the World Bank, the United Nations and also the European Union.

In the last decades of the 20<sup>th</sup> century the study of inequality was firstly mainly linked with the elimination of poverty (Kenworthy, 1999), in a more economic and financial perspective, and then the concept was extended to embrace other social and political aspects referred to as social exclusion (Levitas, 2006). However, in the 21<sup>st</sup> century, more attention is being put on the existence of very rich people (Tomé 2012). In fact it is the existence of those very rich people, growing in numbers that has increased inequality recently.

## **2.3 Welfare States**

In civilized and modern societies, social policy is defined as the set of actions performed by the society to solve the main social problems (Barr, 2004). In consequence SP relates to education, health, social security, law, environment, crime and other social problems (Le Grand and al, 2008).

In modern societies also, SP are usually performed by Welfare States (WSs). WSs linked the various actors of the welfare scene: public forces, private forces, private non-profit, families, and the foreign providers. The form by which these actors interact is called the Welfare Mix. Different forms of Welfare State exist – Liberal, Conservative, Social Democratic, Latin, and Marxist, (Esping Andersen 1990, Deacon, 2000) depending on the way the Welfare Mix is organized.

WS tend to be a feature of advanced countries. In less developed countries only Welfare Societies exist and the social problems are mainly solved and addressed by families, and sometimes with the help of international aid. The summary of the main characteristics of each form of WS is presented in Table 1, below:

**Table 1:** Main characteristics of the WS forms

	Main author	Basic principle	Role of State	Type of justice	Practical applications
Liberal	Adam Smith and then Milton Friedman	Liberty	Minimal	Retributive	Anglo Saxon countries
Conservative	Bismark and the Catholic Church	Dialogue	Subsidiary	Commutative	Germany and Japan
Marxist	Karl Marx	Class Struggle	Total	Revolutionary	Eastern European Countries 1945-1989
Social Democratic	Keynes	Compensation of Government failures	Big House	Redistributive	Nordic States
Latin	Social Doctrine of Church	Dialogue but imposed	Weak and less democratic for of Conservative	Commutative with failings and privileges	Iberia and Latin America

Source; adapted from the author from Esping Andersen 1990 and Deacon 2000

There are also other ideas, often called the Critical Way, which in the last 50 years have gathered thinkers like Michel Foucault on illegalisms, Ivan Illich on schools, the green and sustainability movement, analysis on gender and on minorities. In general the concerns of these thinkers have been more or less absorbed by the big currents of Liberalism, Social Democracy, Conservatism and Marxism.

### 3. The relation between intellectual capital and inequalities and the role of Welfare States

#### 3.1 IC and inequalities two worlds apart

In fact IC and inequalities are two fields that have been growing separately and in opposite directions (see Table 2 below).

**Table 2:** Comparison of IC and inequalities analysis

	Intellectual Capital	Inequalities
Dominant Subject of analysis	Companies	Individuals
Dominant problem	Market value minus book value	Reduction of inequality, elimination of poverty and exclusion
Dominant focus	Strategic	Social
Dominant methodology	Balance Scorecard	Gini and Theil indexes
Know authors	Edvinson, Kaplan and Norton	Atkinson
Known studies	Bonnerman (Incas study)	Luxembourg income studies,

Source: own analysis

IC analysis was done in relation to companies, based on strategic thinking, and trying to solve the dilemma between market value and book value- with use of methodologies like the Balance Scorecard. Therefore, the reduction of inequalities was never a problem for the people that studied IC. Furthermore, the analysis of national intellectual capital was never translated in an analysis of national inequalities.

And conversely, or symmetrically, inequality analysis was never concerned with the strategy of companies but only with some factors that could eliminate or inequality, like education or taxes; this analysis was mainly linked to individuals, had social concerns and was based in well- known mathematical models and indicators.

#### 3.2 Known studies relating IC to inequalities

While searching on Google Scholar, we found very few studies that may relate, even remotely, and directly, IC and Inequalities. Stewart in his seminal book (Stewart 1997) asserted that income inequality was rising due to the rise of knowledge workers. Chu and Peng (2009) developed a model that explains how protecting property rights in countries gives rise to inequality. Finally, the rise of managers pay in the knowledge economy has become a scientific topic (Martin, 2014). Wisniewski (2012) analyses the situation on the financial services sector, and (Lin, Edvinsson and Chen and Beding, 2014) study the issue in a nation-wise perspective, worldwide.

#### 3.3 The role of the Welfare States linking IC and inequalities

IC is essential for the development of economies (Tomé, 2004), and social policies are essential to provide societies with the necessary level of IC (Tomé, 2008). Moreover, Welfare States decisively contribute to the stabilization, balancing, and development of societies. Therefore, while investing in IC, and funding IC investments, Welfare States may do a crucial job of reducing inequalities. Piketty is in favor of such actions (see sections 4 and 5 of this paper and also Piketty 2013 751-882).

### 4. Pikettys' ideas

Piketty's book has 950 pages in its French edition. The text is divided in six main sections: Introduction, part I to IV and conclusion. The four parts have the following titles: Income and Capital, the dynamic of the relation capital/income, the structure of inequalities and ruling the capital in the 21<sup>st</sup> centuries.

In chapter 1 Piketty defines the main concepts he will use in the book: national and world income (Piketty, 2013, 80), national income as shared by capital and labor (Piketty, 2013, 82), Piketty uses a strong assumption – capital is linked to wealth and labor is linked to income. This assumption is very important to understand the French scientist ideas'. Private wealth is the sum of public wealth and private wealth (Piketty, 2013, 87), national wealth as the sum of internal and external wealth (Piketty, 2013, 89). Fundamentally the share of capital in the income is the rate of return of capital multiplied by the ratio between wealth and income. Piketty is in favor of developed systems of national accountability (Piketty, 2013, 99) and describes the inequality of income in the world (Piketty, 2013, 113) and possibility of a convergence (Piketty, 2013, 119). Chapter 2 is devoted to the analysis of

growth (Piketty, 2013, 125-179): demographic growth (Piketty 2013 131) economic growth (Piketty 2013 144), from *les Trente Glorieuses* (Piketty 2013 161) to the end of growth (Piketty 2013 156). The chapter ends with a reflection on the effects of monetary stability on growth through history (Piketty 2013 171-9).

In Part II (chapters 3 to 6) Piketty analyses the evolution of national wealth defined as agricultural lands, housing, other internal capital and external capital (Piketty 2013 191). After a general presentation in chapter 3, Piketty then uses chapter 4 to analyze in succession the case of the UK (Piketty 2013 206), France (Piketty 2013 216), Germany (Piketty 2013 224), Europe (Piketty 2013 234), the USA (Piketty 2013 239), and Canada (Piketty 2013 247). Finally in page 258 of chapter 4 the French author expresses the idea that valuing Human Capital is an indication of a form of slavery! We will return to this bold idea in our section 5, below. In chapter 5, Piketty studies the relation between wealth and income as a function of the savings rate and of the level of economic growth (Piketty 2013 262). Many specific questions are analyzed namely the relation between growth rate and savings (Piketty 2013 274), private savings (Piketty 2013 278 and 282), private foundations (Piketty 2013 288), external assets (Piketty 2013 301) and land assets (Piketty 2013 310).

Quite importantly, between pages 294 and 301 Piketty addresses the rise of the value of assets and the relation between the market value and the book value of companies since 1970 until 2010 (Piketty 2013 297). In page 300 Piketty addresses the immaterial investments of companies, and in the pages 299 and 301 he reflects on Tobin's  $q$  indicator indicating that traditionally  $q$  has been rising as a consequence of the rise in the price of assets (Piketty 2013 299-301). We will address this idea in our section 5, below.

In chapter 6, Piketty analyses the relation between capital and labor in the 21<sup>st</sup> century. The analysis begins with some historical data (Piketty 2013 325-8), and then addresses the question of inflation (Piketty 2013, 331), marginal productivity of labor (Piketty 2013 337 and 340), the substitution between capital and labor (Piketty 2013 341-359). Between pages 353-5 Piketty discusses the idea that Human Capital raise in History might be an illusion; we will discuss this idea in section 5, below.

In Part III (chapters 7 to 12) the current and historical evolution of inequalities are analyzed. Inequalities relate to work (about income) or to wealth (about income but also about heritage (Piketty 2013 380), the latter being always more unbalanced than the former (Piketty 2013. 385, 396 and 401). However in some countries, like the USA, the inequality of revenues rose after the eighties of last century (Piketty 2013 460-1) whereas in other countries like France, Western Europe and Japan it remained stable after a sharp decline since WWII (Piketty 2013 431, 503 and 505). Piketty debates the raise of the "super-professionals" (Piketty 2013 500, 512, 529), and points to the conflicting effects of education and technology (Piketty 2013 482) on this phenomenon. In what concerns the inequality of wealth however, Piketty observes that: first, it was always higher than the incomes' one; second it did not redress so much after WWII; and third it was not much different in Europe and in the USA (Piketty, 2013 548-9, 555-6); the cause of the difference is that, according to Piketty capital revenues rise faster than income (Piketty 2013 557, 560); for the future Piketty is concerned but not afraid that the 21<sup>st</sup> century will be more unbalanced than the 20<sup>th</sup> (Piketty, 2013 499). In a long analysis to the flux of heritages and donations (defined as variable  $b$ ), explained by three variables (the relation between wealth and income, mortality rate and the relation between the wealth of the living and the wealth of the dead (Piketty 2013 608-9), Piketty concludes that in the last century variable  $b$  has not been decreasing (Piketty 2013 604 and 677) and will probably grow in the 21<sup>st</sup> century at least for France (Piketty 2013, 633). "Heritage will not disappear, it will only be different" (Piketty 2014 669), and we are becoming a society of small heirs who anyway derive around a quarter of the resources they will have available in their lifetime from capital (Piketty 2013 665). Those heirs will benefit from "rents" and constitute the backbone of a "society of small tenants" (Piketty 2013 665); those tenants will profit from the fact that the wealth grows faster than income; this divergence exists within the free market (Piketty 2013 675).

In chapter 12 (Piketty 2013- 685-747) Piketty writes what could be in its own a small book on the fortunes on billionaires and millionaires in the current times (Piketty 2013 685-748). He analyses the rankings of fortunes (Piketty 2013 688) and of billionaires (Piketty 2013 695); he also analysis reasons to belong to these rankings; heirs and entrepreneurs (Piketty 2013 701), economies of scale (Piketty 2013 719), sovereign debt (Piketty 2013 729), oil funds (Piketty 2013 733) or Chinese investments (Piketty 2013 737). As a conclusion to this part Piketty states that the increase in the international inequality in wealth distribution will lead probably to more oligarchies and less democracy (Piketty 2013 740).

For the future (analyzed in part IV, between chapter 13 and 16), and as a solution to the unbalanced tendency he foresees in the world economy, Piketty asks for 3 actions: a new social policy, a progressive tax over revenues and a world tax over capital (Piketty 2013 751-882). First, about social policy, Piketty is in favor of redistribution, and also in favor of an increased support to education and to pensions by the State (Piketty 2013 774 and 783). He is also concerned and interested in the fact that the Welfare State has to be built in emergent countries as a way of ensuring the planet's future (Piketty 2013 791). Secondly, about the progressivity of the tax on incomes, Piketty asks for a maximal level of 80% in the developed and rich countries (Piketty 2013 831) and that policy would be a factor against the possible "oligarchic derive" (Piketty 2013 833). But, thirdly and last but not the least, in order to fund the Welfare State, Piketty asks for a progressive tax on wealth (Piketty, 2013, 856).

The book ends with a chapter on public debt (Piketty 2013 883-940) and with the Conclusions section (Piketty 2013 941-950).

## **5. Discussion**

It is perhaps a good measure of the place IC has in Economic Science and even more specifically in the discussion on inequalities, that in 850 pages on text we only found three pages (299 to 301) in which IC is directly addressed. In those 3 pages Piketty states that "immaterial" investments have increased in the last 40 years in advanced societies and as a consequence Tobin's  $q$  has increased, meaning that the difference between the market value and the book value of companies has increased.

In all the rest of the book, it seems to us that IC was not considered. The omission of IC is a pity, because in our opinion, considering IC would reinforce both the analysis and the explanations of the fact Piketty offers. The examples of this are many:

- When in pages 353-5 Piketty states that Human Capital may be just an illusion, he is omitting the fact that, historically we went from the unskilled labor of the Marxist Era, to the Intellectual Capital of our Knowledge Era, passing by the Human Capital analysis of the 20th century. It is not for nothing that we may say that if Marx were born now, he would have written The Information and not Capital (Tomé 2005). This omission of any analysis on the Intangibles, any reference to Knowledge as an economic driver, weakens in our opinion the analysis of Piketty.
- The phenomena of "super-professionals" analyzed in page 500, and that seems to interest and intrigue Piketty, may be, in our opinion also explained by IC. By this we mean that those elite people are the ones that, conscious or unconsciously have used personal IC better for their benefit – by using competences, social relations and routines to obtain extremely high revenues and wages in the labor market (Tomé and al, 2014).
- Piketty's chapter 12 could be edited as a remarkable short book on billionaires and millionaires; the question of very rich people has been analyzed in relation to IC – millionaires sometimes have specific forms of talent whose returns are potentiated by technology; billionaires derive their wealth from the organizational position they have and from the benefit they generate using the IC of companies and the labor force of those companies (Tomé, 2012). IC is a way or the way of promoting and making possible the existence of both types of people.
- The idea of the emergence and emergency of social policy for IC (Piketty 2013 774) is also very interesting and should be reinforced as form of enhancing development (Tomé 2004, Tomé 2008).
- The idea of a tax on wealth (Piketty 2013 831 – 856) would be of extraordinary importance for the billionaires and the millionaires phenomena, and we should never forget that IC is at the root of these two phenomena nowadays (Tomé, 2012).
- The idea expressed in page 258 about HC valuing being something like slavery encounters many supporters. Even, the Nobel Prize Mohamed Yunus recently defended that jobs are making people slaves and that we need to be entrepreneurs, to free ourselves from that slavery. However, we also think that IC is a way of liberating humans from the mentioned form of slavery by using not only our competences but also our routines and our brand for our own benefit.
- Finally we doubt that the present society, even if rents are important we be less democratic and more oligarchic (Piketty 2013 740) because we believe that the internet possesses the power of giving freedom of speech, speed and power to the ordinary citizen. Furthermore we believe that ordinary citizen will be able to prosper from its own IC and that in the long run inequality and poverty will diminish.

## 6. Concluding comments

The first main conclusion of this paper is of theoretical scope and precludes Pikettys' work. Namely we made perfectly clear in section 3 that IC and inequalities are two scientific fields which have been growing and living separately. The situation is both extraordinary and very important because we believe that IC explains inequality and the growth of inequality.

The second main conclusion of the paper is that, Pikettys' analysis, for all its importance, and novelty, is traditional and surprisingly old fashioned when it comes to considering Intangibles. He never uses IC, he seems to be unaware of IC analysis. The celebrated French author behaves in fact like an old fashion analyst of inequalities: - IC analysis with few exceptions has been linked with management and not with economics or sociology and politics like Marxism. To sum up, we don't know, but we would not be surprised, if with all his theoretical background Piketty never read any of the seminal books in IC by Edvinsson, Kaplan and Norton and many others.

We believe that in the near future a book called "Intellectual Capital in the 21<sup>st</sup> century" should, must and ought to be made. The book would place Piketty's analysis in the framework of IC and would be of huge benefit and interest for the communities of IC, economics and inequality scholars and practitioners. In the discussion section, we point out seven subtopics for which we believe the use of IC could well benefit Piketty's analysis, namely: Human Capital, super-professionals, billionaires, social policies and development, taxes on wealth, modern slavery, and the rise of political oligarchies in the 21<sup>st</sup> century. These topics could serve as chapters in that book about "Intellectual Capital in the 21<sup>st</sup> century".

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