LES CAHIERS

Louis Bachelier

HOW CAN FINANCE SUPPORT SUSTAINABLE DEVELOPMENT?

WITH

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THE SUSTAINABLE FINANCE AND RESPONSIBLE INVESTMENT CHAIR

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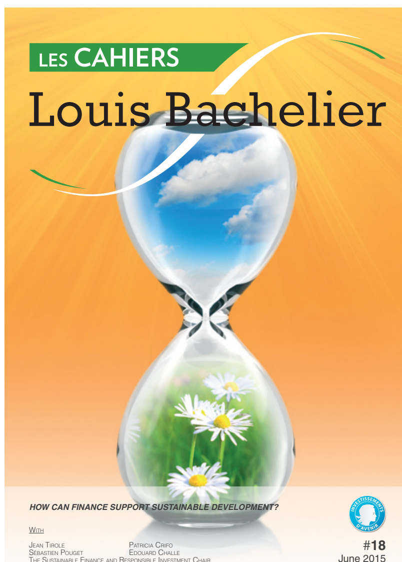

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Patricia Crifo

Sébastien Pouget

Created in 2007 on the initiative of the Association Française de la Gestion Financière (AFG), the Sustainable Finance and Responsible Investment (SFRI) Chair, bringing together some twenty researchers of international repute, has been in operation for eight years. The Chair has produced numerous scientific contributions in the field of responsible finance, which are summarized here. By encouraging interaction between researchers and practitioners, the Chair is able to identify relevant areas for research and to conduct large-scale field studies. The present issue of Cahiers illustrates both these aspects, with one article on sovereign debt and another on investors' reasons for opting for socially responsible investment.

With the Greek debt crisis of 2010 acting as a reminder that sovereign bonds are far from being risk-free assets, it has become important to identify the main determinants of the cost of sovereign debt. In 2013, Germany, with its debt amounting to 80% of GDP, was borrowing over 10 years at 1.9%, while Australia, with a debt level of only a third of its GDP, was borrowing at 4.23%. What criteria do investors use to analyse sovereign bond risk? SFRI Chair researchers have studied the role of extra-financial criteria, and their main findings are presented in an article in the present issue.

Another central question pertaining to sustainable finance is how savers can be encouraged to invest in responsible companies. In particular, since individual investors account for less than 5% of the amount invested in SRI funds, it is crucial for the growth of these funds that the determinants of individual demand be better understood. Thanks to the support of various partners of the SFRI Chair, its researchers were able to carry out a study covering more than three thousand customers of French banking and insurance groups. You can read the main findings of this study in this issue of Cahiers.

The inaugural lecture on the creation of the Chair in 2007 was given by Jean Tirole, 2014 winner of the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel (commonly known as the Nobel Prize in Economics) and a particularly prolific contributor of the Chair since its inception. A summary of his contribution to the understanding of responsible finance is provided in this issue of Cahiers, as well as an article on the relationship between ethics and the market.

Enjoy your reading!

Patricia Crifo and Sébastien Pouget, co-directors of the SFRI Chair

PARTNAIRS

Shareholders as drivers of corporate social responsibility

In view of the shortcomings of markets and the state, it is up to investors to make sure that long-term issues become central to corporate concerns.

Key points

- Markets and states are both liable to shortcomings. Companies' positive externalities are not sufficiently rewarded, and their negative externalities are insufficiently penalized.
- The structuring of remuneration can encourage executives to focus on short-term goals at the expense of long-term considerations.
- Shareholders should remedy these shortcomings by encouraging companies to act in a socially responsible manner.

Based on the papers "Individual and Corporate Social Responsibility" and "The Bonus Culture: Competitive Pay, Screening, and Multitasking" by Roland Bénabou and Jean Tirole.

What is the role of a company? What responsibility should it assume within society? How should shareholders position themselves in relation to these issues? While the concept of corporate social responsibility is by no means new, in recent years it has changed considerably.

One of the first people to have discussed this idea, amidst considerable publicity, was Milton Friedman in his paper "The Social Responsibility of Business is to Increase its Profits" (1970). In his view, the sole purpose of businesses is to maximize their profits, now and in the future. The pursuit of profit is, according to Friedman, aligned with the interests of society. Economists sometimes set out from the assumption that markets, like the state, work perfectly. Thanks to competitive markets, companies and individuals have the goods and services they need, while the state penalizes, through regulation or taxation, negative behaviour on behalf of society (for example, pollution). Companies thus seek higher profits while internalizing the consequences, positive or negative, of their actions on society. Hence Friedman's idea of generalizing the invisible hand through a separation of tasks, with the state correcting externalities and companies maximizing their profits. While this is a consistent position, its assumptions do not always conform to reality.

Overcoming the shortcomings of markets and the state

Markets suffer from a number of shortcomings. For example, they do not naturally penalize highly polluting activities. Though the state should in principle act in such situations, it too faces certain limitations. Lack of information, pressure exerted by interest groups, and the inability to act beyond its borders, are all factors that restrict its powers of intervention.

Short-term interests often favoured at the expense of long-term benefits

Taking advantage of these shortcomings on the part of the state, companies produce too many negative externalities and not enough positive externalities. The penalties, like the rewards, provided by markets and states are sometimes inadequate (as demonstrated by the glaring example of the current under-pricing of carbon). Roland Bénabou and Jean Tirole thus show that it is up individuals to act – as employees, consumers or shareholders. Citizens can directly influence corporate strategy and delegate philanthropy to firms by encouraging them to act in a responsible manner. This is the principle of delegated philanthropy. Corporate social responsibility entails finding the right balance between profits and positive externalities, in order to satisfy shareholders, consumers and

Jean Tirole

Jean Tirole is president of the Toulouse School of Economics (TSE), Scientific Director of the Institut d'Economie Industrielle (IDEI) in Toulouse, founder and president of the Institute for Advanced Study in Toulouse (AIST), guest professor at MIT and concurrently director of studies at the Ecole des Hautes Etudes en Sciences Sociales.

A former student of the Ecole Polytechnique (class of 1973) and a PhD in economics (1981, MIT), Jean Tirole has published over two hundred papers in international journals and eleven books including A Theory of Incentives in Procurement and Regulation (with Jean-Jacques Laffont), The Theory of Industrial Organization and The Theory of Corporate Finance.

Jean Tirole has received numerous academic awards including the CNRS Gold Medal in 2007 and the Nobel Prize in Economic Sciences in 2014.

other stakeholders – a policy that can turn out to be beneficial for all parties. Thus when Starbucks decided to use fair trade coffee, consumers agreed to pay a premium for this commitment.

Reconciling the short and long term

Corporate social responsibility also finds its justification in conflicts of interest between the short and long term. While the former often takes precedence over the latter, maximization of short-term profits often leads, as collateral damage, to the production of long-term negative externalities. For example, economizing on maintenance could result in an environmental disaster or the marketing of a product that is attractive but dangerous in terms of health.

This dissonance between time frames is partly attributable to managers' remuneration schemes. Bonuses are usually associated with short-term goals, which are more measurable and visible than long-term performance. In addition, the rapid turnover within governing bodies (which is, moreover, justified) and doubts about the permanence of managers in the company encourages the latter to focus on the short term in order to post good results. Another aspect of socially responsible investment is thus making sure that the long-term outlook is kept in mind. Again, SRI is not necessarily incompatible with returns, except sometimes in the short term.
Competition for managerial talent can also lead to short-termist behaviour, even in companies with a good balance between the short and long term. These companies are "forced" to increase the variable portion of executive compensation to attract or retain talent, since the most talented managers prefer compensation based on results as opposed to the fixed part of their remuneration. The idea is that the market for managerial talent forces companies to adopt a "bonus culture" and thus focus on the short term, in a way that is costly for society as a whole.

Moreover, when top executives are in short supply and with growing competition among recruiting agencies, shareholders tend to emphasize bonuses linked to short-term results, which are more attractive to the most talented managers. Long-term issues, such as prevention of industrial accidents or the reduction of pollution, are here relegated to the second division. Indeed we have simultaneously seen a rise in competition in the market for business executives (as in other professions) and increasing inequality in management pay. This widening pay gap is entirely accounted for by incentive bonuses and not at all by any increase in the differences between fixed salaries.

Shareholders committed to the long term

Introducing a corporate responsibility strategy within companies is therefore essential for correcting the shortcomings of the market and the state, such as these may be, and for restoring the balance between the short and long term, when this is upset. But such a strategy can only take place under certain conditions. First, socially responsible investment is naturally more the concern of long-term investors. Shareholders should also engage with the company, explaining their approach and emphasizing the non-financial targets they consider important. For this, the economic logic – What are the shortcomings of the market-regulating state? Is there a short-termist bias in the company? – must be prioritized.

Finally, a social responsibility strategy will bear fruit only if it is shared by a large number of companies. Some companies might be tempted to operate as "free-riders", i.e. letting others act while taking advantage of the common benefits. Socially responsible investment funds have a role to play here too, by urging the various companies in which they invest to pull in the same direction.

Find the works
of Jean Tirole
on http://fdir.idei.fr
and on www.louisbachelier.org

How can individuals be attracted to socially responsible investing?

There are still very few private investors putting their money into socially responsible funds. Is this reluctance due to lack of interest or ignorance of the products? The effective promotion of socially responsible investing entails identifying the factors that encourage or discourage savers.

Key points

- Individuals are willing to support socially responsible investment. In the experiment, 89% of respondents chose at least one responsible fund.
- The propensity to back SRI, however, varies according to the person's psychological profile.
- People who are convinced that their individual actions can have an impact on society are more inclined to choose a socially responsible fund.
- The presence of a label or SRI certification increases the attractiveness of a fund.

Based on the working document "Why do investors buy socially responsible investment funds?" by Jean-François Bonnefon, Marco Heimann and Sébastien Pouget.

Yields are not the only factors that analysts pay attention to. Extra-financial criteria are increasingly taken into account, to the extent that Socially Responsible Investment (SRI) now represents around 20% of assets under management in Europe. But its further development requires a better understanding of investors' hesitations and motives with regard to SRI. Indeed there is considerable room for growth, especially among private investors, who account for only 4% of the total amount invested.

How is such a low level of participation to be explained? Are investors resistant to SRI funds? Are there any ways of increasing their investment level?

To answer these questions, Sébastien Pouget, in collaboration with Jean-François Bonnefon and Marco Heimann, has developed an innovative methodology: placing customers of a bank or bank insurance network in a real investment situation with a view to studying their choices and behaviour. A competition was thus organized. The principle is simple: each participant answers a questionnaire in which he says how he would allocate 5,000 euros between different funds (SRI and non-SRI), knowing that one person will be randomly selected and will actually receive the funds chosen.

"The societal impact of SRI funds seems to be a powerful lever for boosting demand by individual investors"

The experiment enables two questions to be explored: whether or not participants invest in SRI funds, and the amount allocated to SRI funds. These choices are then analysed in terms of psychological, financial and external parameters (such as the presence or absence of a label or ISR certification). "The participants were not all given exactly the same proposals", Sébastien Pouget explains. "Some were offered two SRI funds, others five; labelling or certification of an SRI fund was sometimes emphasized, sometimes not. In this way we were able to measure the impact of each factor."

Investors with strong convictions

The results are quite encouraging for proponents of SRI, since 89% of the participants chose to invest, at least partly,

1. *Source Eurosif 2014*
2. *The study was subject to a CNIL declaration and was carried out under the supervision of a judicial officer.*

Sébastien Pouget

Sebastien Pouget is professor of finance at IAE Toulouse and member of the Toulouse School of Economics (Université Toulouse 1 Capitole). He was a visiting professor of economics and finance at Princeton University where he taught asset management and behavioral finance, and at New York University – Shanghai Campus where he taught corporate finance. His research studies financial markets with a multidisciplinary approach combining insights from economics, psychology and history. It has been published in international academic journals such as Econometrica, the Journal of Finance and the Review of Economic Studies. Sébastien Pouget is co-director of the Sustainable Finance and Responsible Investment Chair, a research center on sustainable finance and responsible investments.

Methodology

The study was conducted on 3,100 customers of the FDIR Chair's partner banking and banking-assurance networks. Within the framework of taking part in a contest, participants stated how they would allocate a sum of €5,000 among various conventional and ISR funds. At the end of the experiment, one of the participants was selected by lottery and won the funds chosen.
In addition to the choice of investment, the questionnaire helps determine the psychological profile of the participants (altruism, concern for social image, bias toward the present, propensity to take risks, perceived self-efficacy) and their level of knowledge in the area of finance.

in a socially responsible fund. Moreover, the amounts invested in SRI funds were 40% larger than those invested in traditional funds in the same asset class. In addition to these averages, the study highlights several factors influencing socially responsible investment.
People's psychological profile plays a crucial role. The first criterion is that of "perceived self-efficacy", i.e. the capacity people believe they have to influence society as a whole. Can someone's efforts in favour of sustainable development, through consumer choices for example, have a social or environmental impact? The answer is directly related to their personal convictions. Individuals convinced of their "personal efficacy" are more likely to invest in SRI. According to the study, an increase of 1% in "perceived self-efficacy" increased SRI investment by 7%. Similarly, people concerned about their social image pay more attention to non-financial criteria. The experiment shows, for example, that such investors are more likely to opt for an SRI product when they know that their investment decision will be made known through a website.

Investors' time preferences are also crucial. Impatient investors, more concerned about the present than the future, invest little in SRI funds, as these are more oriented to the long term.

Better to limit the number of funds offered

The other axis affecting investments concerns the way in which the offer is presented and communicated. Simplicity and selectivity seem essential: the greater the number of funds presented, the less the allocation to SRI. Thus when only two SRI funds were offered to participants in the contest, 95% chose one or other of these products. Whereas when five funds were available, the figure was only 83%. Moreover, the presence of a label or certification attesting to the socially responsible orientation of the fund increases the probability of investing in SRI by 5% when many funds are available. It seems, therefore, that people are willing to invest in SRI, provided that the nature of offering can be clearly understood.

Finally, economic and financial factors such as the level of risk or the expected social impact naturally influence investors' choices. The greater the expected impact, the higher the probability of opting for SRI and the greater the amount invested. Similarly, the probability of investing in SRI increases when the perceived risk is relatively low.

Individuals are thus not averse to SRI, even if, for now, their investments remain limited. This discrepancy between theory and practice is partly explained by communication errors with regard to these products. "SRI funds are emphasized less than conventional products in banking networks", says Sébastien Pouget. "But their performance is respectable. The design and publicizing of such funds certainly need to be reviewed. Our study argues in favour of SRI funds, the impact of which can be easily demonstrated, and in favour of communication policies that promote the role of individuals in society."

Socially responsible commitment, underlined by a label or certification, and the clear and systematic presentation of SRI funds would be likely to attract more savers.

Find the
Sébastien Pouget's interview
on http://fdir.idei.fr
and on www.louisbachelier.org

The bond market takes account of governments' ESG commitments

The sovereign debt crisis has prompted market players to review their assessment of government-issued bonds. Is the risk associated with such bonds solely due to macroeconomic conditions in the country concerned? Or do extra-financial criteria affect the level of risk, and thus the cost of debt?

Key points

- Macro-economic factors are not the only determinants of sovereign bond prices. The markets also take into account the country's non-financial performance. Good performance in terms of ESG reduces the cost of a country's debt.
- The impact of extra-financial information is even greater on short-term bonds.

Based on the paper "Measuring the effect of government ESG performance on sovereign borrowing cost" by Patricia Crifo (Ecole Polytechnique, Paris Ouest University and Cirano), Marc-Arthur Diaye and Rim Oueghlissi (Evry University) and on an interview with Patricia Crifo.

Bonds issued by governments of developed countries have long been considered a relatively safe asset for institutional investors. But the Greek crisis of 2010 was reminder that debt could be very volatile and that sovereign bonds were far from infallible – a state of affairs that some people blame the rating agencies for not having correctly anticipated. Was their predominantly financial method of analysis at fault? Are the economic fundamentals of a country sufficient to take the measure of the sovereign bond market or should extra-financial information be included? Do the markets themselves explicitly, not only implicitly take into account environmental, social and governance (ESG) criteria?

There is relatively little academic research on this subject. The limited attention paid to governments' ESG performance in the sovereign bond market is explained largely by the fact that these factors are viewed as qualitative, while the main factors identified as determinants of bond yields are chiefly quantitative, whether linked to the macroeconomic performance of countries (state of public finances, size of the bond market), to international factors, or to risk aversion.

ESG criteria have an impact on the cost of debt

In their paper, Patricia Crifo, Marc-Arthur Diaye and Rim Oueghlissi propose studying the relationship between the financial and extra-financial performance of bond funds by examining the relationship between ESG factors and the return on sovereign bonds. Specifically, the authors study the impact of countries' ESG performance, measured by the Sustainable Country Ratings produced by the extra-financial rating agency Vigeo, on government bond spreads. To do so, the researchers draw on data from 23 OECD countries over the period 2007-2012.

> *An improvement in a country's ESG score can help reduce the reltiver interest rate gap on its debt*

The study shows that financial criteria do not explain everything. Indeed, though macroeconomic factors such as inflation and debt levels are the primary determinants of spreads, they do not explain a residual difference between "economically" comparable countries. For example, why is it that Australia, whose debt represents a third of GDP, borrows at a rate of 4.3% over 10 years, whereas Germany, with a much larger debt (about 80% of GDP), pays only 1.9% interest?

One answer is found in terms of extra-financial criteria. ESG ratings negatively affect spreads, i.e. relative interest rates (in relation to US rates). The marginal effects revealed show that for a country whose rate of interest is more than 2% higher than the US rate (5% compared to 3%, for example), a 1% improvement in the Vigeo index would lower the gap in rates by 0.4 to 0.6 percentage points. "From a strictly financial point of view, debt

Patricia Crifo

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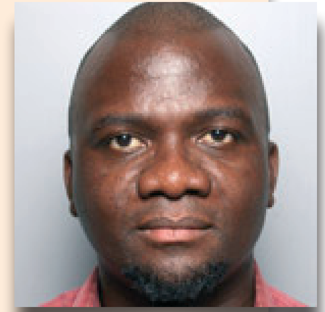
Marc-Arthur Diaye



Marc-Arthur Diaye is Assistant Professor at Evry Val d'Essonne University, Director of the Economics Department and Scientific Advisor to the Commissariat Général à la Stratégie et la Prospective. His research interests focus on decision theory and applied economics. His work has appeared in various journals, including The Journal of Mathematical Psychology and The British Journal of Industrial Relations.

Rim Oueghlissi

Rim Oueghlissi is a PhD student in the economics department of Evry Val d'Essonne University. Her thesis, co-supervised with the Business School of Management, Tunis, focuses on Corporate Social Responsibility (CSR) and Socially Responsible Investment (SRI) and their links with companies' economic and financial performance. In 2013, she published a paper in the Revue Française de Gestion, for a special issue on SRI.

Methodology

The authors examined the empirical correlation between yield spreads on sovereign bonds and corporate social and environmental responsibility in developed countries, for three maturities (two years, five years and ten years). To this end, they used econometric analysis of panel data on a sample of 23 OECD countries covering the period 2007-2012. Social and environmental responsibility was evaluated on the basis of Vigeo's Sustainable Country Ratings.

boils down to a cost. But ESG analysis also views debt from the angle of its use," says Patricia Crifo. "How is it spent? Does it, for example, finance long-term investments to improve health or education? Public debt can then be seen as positive in some respects."

A greater impact in the short term

Contrary to popular belief, the market is therefore not only concerned with financial criteria but also takes into account countries' environmental, social and governance performance. "The extra-financial rating is itself information that is valued by the market," says Patricia Crifo. The effect of extra-financial ratings on sovereign bond spreads, however, varies depending on the maturities concerned: the shorter the maturity, the greater the impact. The observed correlation between a country's ESG performance and the interest rate on its securities is thus greater for 2-year bonds than for 10-year bonds.

Moreover these findings, robust at different specifications, underline the importance of the role of extra-financial ratings in the assessment of risk in financial markets. In particular, the authors show that the information content of ESG ratings extends beyond the set of quantitative variables traditionally used as a determinant of extra-financial rating. Indeed, while the extra-financial rating partly reflects indicators such as CO_2 emissions, protected areas as a proportion of total area, expenditure on social protection and health as a proportion of GDP, and the quality of institutions, it provides an additional measure of countries' ESG performance, which plays a part in the cost of sovereign debt.

The study shows moreover that financial and extra-financial objectives can be aligned – a consideration that should encourage governments to better integrate sustainable development into their policies.

Find the
Patricia Crifo's interview
on http://fdir.idei.fr
and on www.louisbachelier.org

Research in support of responsible finance

How can economic and natural resources be managed in a responsible manner? What good practices should be adopted? What kind of regulation? What calculation methods? These questions have become central. The UN Conference on Climate Change, which will shortly be held in Paris, is a case in point. Academic research, such as conducted by the Sustainable Finance and Responsible Investment Chair, can make a contribution to a better understanding of these issues.

During the last decade, the demand for sustainable and responsible economic development has become urgent. But this concern also gives rise to many questions. Does corporate social responsibility generate strong performance? What motives are characteristic of responsible investors? What roles should shareholders play? Just some of many issues addressed by the Sustainable Finance and Responsible Investment Chair. The present article focuses on two other equally important topics: the problem of evaluating very distant events and the impact of independent governance on corporate performance.

What value should be assigned to future benefits?

Private investors, in common with policy-makers, assess the value of a project by comparing its costs with future returns. But as well as estimating these returns, one needs to know what value should be given today to benefits that will accrue only in five, ten or twenty years time. This calculation is carried out using a discount rate. The higher the discount rate, the greater the preference for the present. Conversely, the lower the discount rate, the greater will be the effort made on behalf of future benefits.

People are generally characterized by a certain impatience: they prefer an immediate return rather than a more distant one. As a result, long-term projects are penalized by a higher discount rate, which reduces their attractiveness.
For instance, the economist William D. Nordhaus recommends using a 4% discount rate. Such a rate assigns the value of one tonne of wheat to a project that will generate 50 tonnes of wheat 100 years later. This means that a project aiming to produce 50 tonnes of wheat 100 years from now, but whose initial cost amounts to two tonnes of wheat, will not be viable.

This method particularly penalizes projects for sustainable development. Indeed, their returns typically materialize only after a number of years. Thus the development of renewable energy, through the construction of new infrastructure, involves a substantial immediate cost, whereas the environmental benefits will be visible only many years later. Traditional discounting methods, which entail higher rates for longer term projects, could hamper such investments.

Less penalized long-term projects

A number of the Chair's researchers, including Christian Gollier, a member of Intergovernmental Panel on Climate Change (IPCC), and Nicolas Treich, a member of the Plateforme nationale d'actions globales pour la Responsabilité Sociétale des Entreprises (National platform for global action for Corporate Social Responsibility), have worked on this subject.

Their work suggests that the 4% discount rate proposed by William D. Nordhaus excessively penalizes long-term projects, and that such a penalty is not necessarily justified.

> *A high penalty for long-term projects is not necessarily justified*

First, long-term risks are much more difficult to quantify than short term-risks. Second, it is very difficult, if not impossible, to foresee the rate of economic growth over the next 100 years. But a low growth rate, which cannot be excluded over such a time scale, is associated with a low interest rate. Thus, taking into account uncertainty as regards the future and the possibility of a long period of stagnation, it appears that a discount rate below 4% for very long-term projects would probably be more appropriate.

In addition, people's welfare depends not only on their consumption of products and services, but also being able to enjoy clean air, clean water and attractive surroundings, all of which are "goods" that can be damaged by economic activity in the absence of effective regulation. This complementarity between environmental goods and standard consumer goods is not properly taken into account by economic agents, who fail to appreciate the negative impact of environmental degradation on how they will profit in the future from standard goods. From this standpoint, a low discount rate that stimulates environmental investment not only benefits the environment itself but also the use of standard goods.
Finally, uncertainty regarding the outcomes of sustainable development projects sometimes interacts with agents' learning process. On the one hand, uncertainty about long-term impacts, such as the effects of global warming, leads to the utilization of lower discount rates. On the other, the gradual advance of scientific knowledge in this area reduces uncertainty, thus warranting the use of a higher discount rate.

Edouard Challe

Edouard Challe is a Research Director at the CNRS, and professor at the Ecole Polytechnique and at CREST-ENSAE. Before joining the Ecole Polytechnique, he taught at the University of Paris-Dauphine and the University of Cambridge.

Patricia Crifo

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Sébastien Pouget

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Are independent directors a source of efficiency?

The researchers have also looked at the question of the independence of directors. This is traditionally seen as a guarantee of transparency, good management, and therefore corporate performance. The best argument in favour of independence was probably given by Gordon (2007): independent directors ensure that market information is quickly incorporated into managers' decisions, and thus protect the interests of shareholders.
The fragmentation of companies' shareholder base has strengthened this requirement. Thus France has gradually followed the US example by advocating a minimum percentage of independent directors. The AFEP-MEDEF code, requiring listed companies to "comply or explain", recommends that at least half of the directors be independent. But is this recommendation really a source of performance?

Edouard Challe, Sandra Cavaco, Patricia Crifo, Antoine Reberioux and Gwenaël Roudaut tested this hypothesis in a study of 341 French listed companies. They analysed the relationship between the proportion of independent directors and the companies' financial performance. The study views an independent director as a someone who has not served on the Board for more than nine years, is not part of the management of the company (or of the management of another company in which a member of the management of the company concerned participates), does not have more than 3% of voting rights, and is not in a business relationship with the company of which he is a director. Here it is a matter of having a sufficiently strict definition of independence (stricter than that of the AMF, for example), which certainly includes an arbitrary element but has the advantage of providing a clear demarcation between "independent" and "non-independent", a demarcation that is essential for any empirical work.

Surprisingly, the study found a negative relationship between board independence and financial performance. On average over the period covered, companies whose boards include a higher proportion of independent directors have tended to perform less well. Two preliminary explanations may be advanced. First, since independent directors are by definition have less linked with the company's sector than "insiders", they may lack expertise on the company's business. Second, business leaders may be reluctant to share information with people who are supposed to monitor them. Ultimately, independent directors do not seem to have what is needed to carry out their duties satisfactorily.

These findings suggest that, in France, the costs of independence would have been greater than the benefits over the last decade.

Find the works of Edouard Challe, Patricia Crifo and Sébastien Pouget on http://fdir.idei.fr and on www.louisbachelier.org

THE JEAN TIROLE'S FORUM[1]

Ethics and the market

Ethics versus the market: Is it possible, or even desirable, to exclude once and for all some areas of the law from the market sector? For Jean Tirole, President of Toulouse School of Economics, the issue is much more complex than it looks.

Moral limitations of the market…

In the eyes of economists, the market is a powerful resource allocation mechanism. It also protects the citizen from lobbies and discretionary power, as may occur in planned economies where the mechanisms for allocating resources are more centralized. For these reasons, it plays a central role in economic life. But benefitting from the virtues of the market often involves a departure from laissez-faire. In fact, economists have devoted much of their research to the identification of market failures and their correction through public policy: competition law, regulation by industry and supervisory authorities, taxation of environmental or congestion externalities, monetary policy and financial stability, mechanisms for providing mechanisms merit goods such as education and health, redistribution, and so on.

Specialists in other social sciences – philosophers, psychologists, sociologists, lawyers and political scientists –, much of civil society and most religions have a different view of the market. While acknowledging its virtues, they often reproach economists for not sufficiently taking into account ethical issues, and the need to establish a clear boundary between the market and non-market realms.

One symptom of this perception is the worldwide success of the book What money can't buy: the moral limits of markets by Michael Sandel, professor of philosophy at Harvard. In it, he argues that the adoption of children, surrogacy, sexuality, drugs, military service, the right to vote, pollution and organ transplants should not be commodified by the market, in the same way that friendship, admission to major universities or Nobel Prizes should not be purchased, or

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genes and more generally living material be patented.

… market failures?

Some of these examples reflect a lack of knowledge of extensive work by economists in Europe and the United States over the last ten years and sometimes much longer. These theoretical and experimental studies – in the field, in the laboratory and in neuro-economics – cover topics as diverse as morals and ethics, social norms, identity, trust and predatory phenomena generated by incentives.

For example, the idea that one can buy true friendship, admission to a university or a Nobel Prize violates the basic theory of information asymmetry: these "goods" would lose their value if they could be bought! A market for the adoption of children where "sellers" (biological parents, adoption agencies) and "buyers" (adoptive parents) exchange children, would not include a third party that is nevertheless very much concerned, namely the children themselves. The issue of drugs, apart from the problems of violence and public health related to hard drugs, raises the question of lack of self-discipline and addiction, of which the individuals concerned are the primary victims. A country where voting rights are traded at a market price would not lead to policies which we would subscribe to "behind the veil of ignorance", that is to say, before knowing our position in society. As for pollution, experience shows that the most frequent recommendation by economists – a unique price for pollutants – has significantly decreased the cost of environmental policies, and thereby considerably strengthened them. With all these examples, so we are therefore in the realm of market failures, which have always been a primary concern of economists.

Another limitation of markets is that under certain circumstances the incentives they create may be counter-productive. Roland Bénabou (of Princeton University) and myself have hypothesized that pro-social behaviour is motivated by three factors: genuine generosity, incentives (for example, monetary) to adopt such behaviour, and a desire to look good, i.e. to have a good self-image, either in one's own eyes or in the eyes of others. This desire to look good can be modelled through "inference theory" (or "attribution theory" in psychology). It is particularly important that the behaviour is public (especially in front of people whose esteem we value) and that it is memorable. This theoretical research has shown, for example, that when the desire to look good is strong, monetary incentives can be counterproductive. If there is payment for an otherwise pro-social act (for example, donating blood), people are afraid that their contribution will be interpreted as a sign of greed rather than generosity, and the signal they send to others is thus diluted. Contrary to a basic principle of economics, a monetary reward can reduce the provision of the pro-social behaviour concerned. Various empirical studies have subsequently verified this hypothesis.

Roland Bénabou and myself have also studied the messages conveyed by public policies with regard to social norms, whether

existing norms or norms that members of society consider should exist. Sometimes the use of incentive measures indicates our fellow citizens' lack of enthusiasm for the public good and may thus devalue the norm of civic behaviour and be counterproductive. To the extent that we all want to retain the illusion that the society we live is virtuous, this also sheds light on the widespread resistance to what economists tell us, as they are often bearers of bad empirical news. This idea also explains why modern societies, eager to proclaim their values, repudiate the death penalty or corporal punishment, even if the person concerned consents to their substitution for the standard penalties.

The non-market domain

Identifying the nature of market failures seems to me more fruitful for the formulation of public policies than simply indignation. To get a better understanding of things, we need to delve beneath the surface and investigate the empirical reality of the situation. Consider an area where the debate lacks depth and requires more thought: organ donation. Many years ago, the economist Gary Becker noted that the ban on selling a kidney restricted donations (mainly reserved for family members or very close friends), condemning thousands of people (in the US alone) to die every year for lack of a donor. Critics of organ markets should therefore not presume they occupy the moral high ground.

Despite the force of this argument, we all feel some discomfort regarding organ donation markets. But it is important to understand why. Is it because we fear that donors are not sufficiently made aware of the consequences of their act (if so, there is a simple remedy: the donor must be provided with impartial information)? Or it is because the sale of an organ, by revealing that people are willing to lose a kidney for a few hundred euros, reminds us of inequalities that we would prefer to forget? Or because we want to protect people against their excessive preference for the present (having an immediately available sum of money as opposed to the harmful consequences in the long term)?

Our attitude toward the market may also stem from our refusal to compare money with certain other objectives. For example, the introduction of financial considerations particularly offends our views on the sanctity of human life. The value of life, as we know, is incalculable. Making explicit health-related trade-offs (such as allocation of hospital budgets or choices pertaining to safety) raises significant controversy. Taboos around life and death, as part of that which is "immeasurable", have consequences, such as an increase in deaths as a result of our bias in terms of choices pertaining to funding hospitals or medical research. Or, to take a less extreme case, two American researchers have shown that even the US funeral market, in principle highly competitive, exhibits quasi-monopolistic profit margins, because of our reluctance to talk about money following the death of a loved one. Yet we all implicitly place a value on life – for example, that of patients in trade-offs around the choice of hospital equipment, or that of our children

in our automobile or holiday choices. But we never want to admit that we make these trade-offs, which place us in almost as intolerable a position as that of Sophie (in Sophie's Choice) in having to decide which of her two children shall live, under the threat that both will be gassed if she refuses to make a choice..

The springs of morality

Are these aversions, these taboos caused by fear of the loss of dignity that would follow even if we merely contemplated such choices? Or fear that society might find itself on a slippery slope?

To move forward, we need to deeply explore the springs of morality and behaviour. In doing so, we will come to understand better how different institutions, whether market or more administered systems, affect our values and behaviour. A recent study by Armin Falk (University of Bonn) and Nora Szech (Karlsruhe University) published in Science shows that the sharing of responsibility erodes moral values. This erosion applies to markets, but already exists with equal power as soon as a decision involves someone else, thereby authorizing (the semblance of) the sharing of responsibility. The existence of "excuses" ("I was asked to do it", "someone would do it anyway if I didn't", "I didn't know", "everyone does it", etc.) in all organizations has allowed reluctance to engage in unethical behaviour to be deflected.

The formulation of economic policy cannot be based on an arbitrary dichotomy between the non-market sector and the market sector and on the cantonment of moral positions. As noted by the psychologist and ethics professor Jonathan Haidt, common morality refers not only to externalities, but also to condemnation of some behaviour without any obvious victim. Yet less than half a century ago, majority opinion condemned sexual acts between persons of the same sex, or (in the United States) between two people of different races, or involving an unmarried woman (but not an unmarried man). Moving to the terrain of economics, twenty years ago there was widespread dislike of tradable emission rights, before they became part of everyday life once it was understood by a minority of the population they helped the environmental cause. Our feelings of distaste are highly unreliable as a basis for ethics. The progress of civilization requires calling into question these feelings and orienting our thinking toward the formulation of public policies.

We need to understand more clearly the basis of fears about the commodification of some areas, along with those pertaining to the associated ethical issues. It is this that the research community, including Roland Bénabou, Armin Falk and myself, will continue to explore in the coming years.

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