Ecological Conversion of Workplaces, Trade Unions and Wage

Tomassetti Paolo (TP)

tomassettipaolo@gmail.com

Department of Economics Marco Biagi, DEAL, University of Modena and Reggio Emilia, Modena, Italy

ADAPT – Association for International and Comparative Studies in Labour and Industrial Relations

Presenting author: Paolo Tomassetti

Paolo Tomassetti holds a Ph.D. in Labour Relations. He is currently Post-doc research fellow at the University of Modena and Reggio Emilia, and Research fellow at ADAPT. His research focuses on decentralised collective bargaining and labour productivity. International research activities include the participation as a researcher and/or project manager in the following EU projects funded by the European Commission: WiRES – Women in Renewable Energy Sector; YOUnion – Unions for Youth; NEWIN – Negotiating Wage (In)equality; FAYP – Fostering Agri-Culture among Young People.

1. Industrial relations and environment: searching for a link

Rewarding managers for company's environmental compliance is now a widespread practice (Singer, 2012; Ceres, 2012). There is also evidence that environmental performance and managers' compensation are positively related (Berrone, Gomez-Mejia, 2009; Ioannou *et al.,* 2014). Using panel data for a sample of firms around the world, Eccles *et al*. find a positive/negative link between monetary/non-monetary incentives and carbon emissions (Eccles *et al*., 2013).

While tying pay to sustainability performance is not new in literature, the expanding practice of including green objectives in gain-sharing schemes through collective bargaining is largely neglected as a research subject. This is also true when it comes to policy reports and researches specifically devoted to address the role of industrial relations institutions in the transition towards a green economy.

At the time when Eurofound published the first research on industrial relations and the environment (Eurofound, 1992), the area of consensus between social partners, i.e. workers' representatives, enterprises and employers' associations, on the subject of environmental initiatives was relatively narrow, with the emphasis being placed on the verified compliance with legislation and conditions, the improvement of environmental audits, and the increasing use of environmental officers in the plant. According to Eurofound, none of the social partners had met the need

to assign to protection of the environment a fully integrated and central role. Furthermore, enterprises were very much inclined to assign to themselves the responsibility for company environmental policy. Only in exceptional cases, they were ready to involve shop floor and trade-union representatives. In 1994, the Dublin foundation issued a more systematic study on social partners' cooperation in environmental protection in Europe (Eurofound, 1994). This was based on the assumption that «employers and employees can provide the impetus for protection of the environment in work and industrial spheres without state intervention, if they bring their industrial relations to bear on the matter». The report concluded that social partners did not yet recognize environmental concerns as a matter for negotiation, except for occupational health and safety issues. They sometimes joined together to block state-imposed conditions regulating the environment, in order to avoid additional financial burdens.

However, recent research suggests that a change in attitudes is underway on both sides. Several studies concerned with the role of industrial relations in the transition towards a green economy show that, during the past decade, there have been remarkably positive developments in this field, although social dialogue outcomes remain weak (Eurofound, 2009; Eurofound, 2011; European Commission, 2011; European Commission, 2013).

In a position paper for Acas, Sarah Pears looks at how trade unions are contributing to tackling climate change (Acas, 2012). She examines why climate change is now a trade union issue and provides an overview of

recent union developments about tackling environmental issues at work. She describes the strategies unions are using to push climate change up in the workplace negotiating agenda and the subsequent impact on workplace relations. She argues that improving business efficiency and building positive workplace relations through "greenworkplace" projects is an expanding area of union influence. However, as the EU studies previously recalled, she only mentions information campaigns, vocational education and training, disseminations of good practices and promotion of the use of renewable energy as main social dialogue outcomes in the field.

Similar conclusions were reached by Rustico and Tiraboschi, who examined the impact of the green economy on the labour market, in terms of employment opportunities (Rustico, Tiraboschi, 2011). According to the authors, the industrial relations system can play a leading role in the transition to an economy with a lower environmental impact by supporting the reorganization and the restructuring of production. Although they conclude that collective bargaining could develop new ways of providing incentives to support the transition towards the green economy, the argument remains uncharted, both in its theoretical and empirical dimension.

The volume "Trade Unions in the Green Economy: Working for the Environment" is the latest frontier of research in the field of what the authors call "environmental labour studies" (Räthzel, Uzzell, 2013). The book focuses on the environmental policies that trade unions are developing

in different countries and industries, and the strategies these policies deploying in order to reconcile the protection of jobs with the protection of the environment. Yet trade unions are analysed as social movements, rather than market forces, and the role of industrial relations and collective bargaining remains unexplored.

The general idea in literature is that 1) social partners might play a role in the ecological conversion of working environments; 2) although best practices are widespread, existent social dialogue outcomes are still weak; 3) so far the potential role of social dialogue has not been fully exploited, especially when it takes the form of collective bargaining.

2. Research question and methodology

The aim of this paper is to contribute to filling the gap in the literature on the role of collective bargaining in the ecological conversion of working environments. The research question underpinning it is how and why trade unions and collective bargaining secure that the transition to greening workplaces has a positive impact on wages. To answer this question, I design a cross-case synthesis on three case studies of companies that negotiated collective agreements introducing gain-sharing plans linked to green objectives (i.e. green pay), such as energy efficiency and energy conservation. Two out of the three selected companies belong to foreign multinational groups. However, all the three case studies concern Italian

plants. The selected companies operate in different industries: one in the manufacturing and wholesale distribution (Luxottica); one in the chemical sector (Renner Italia); and one in the ICT industry (Almaviva).

In paragraph 3, I describe the three cases, by using the contents of the collective agreements that have introduced and regulated the green pay. Precisely, I considered the following collective agreements as units of analysis: Almaviva, Works Council Representatives, 12 July 2009; Luxottica, Filctem-Cigil, Femca-Cisl, Uilta-Uil, 14 October 2011; Renner Italia, Filctem-Cgil, 31 December 2011. I conducted unstructured interviews with trade unionists and works councils' representatives to better understand the functioning of the negotiated gain-sharing schemes. I also considered other primary sources such as trade union and management press release, as well as information taken from companies' websites, official CSR reports and newspapers.

In paragraph 4, I compare the three systems of green pay, highlighting similarities and differences in relation to 1) the context in which they are introduced; 2) their functioning; 3) and the role of trade unions.

Building on the descriptive comparison of the three gain-sharing schemes, in paragraph 5 I use previously developed theory as a template to compare the empirical results of the research, making an early attempt to generalize from case studies to theory.

The paper is exploratory rather than definitive; it relies on an on-going research. If it encourages further studies on aspects that tend to be neglected, any holes left unfilled or mistakes made will hopefully be excused.

3. Experiments of "green pay" in Italy

In an opinion on green jobs, the European Economic and Social Committee points out the potential of collective agreements in securing energy conservation: «New awareness of the need for more restrained consumption will free up resources, which can then be used for other things. Trade union agreements on measurable targets and distribution of profits among businesses and workers could be a useful way of raising widespread awareness of the importance of saving energy» (European Economic and Social Committee, 2011). A similar policy recommendation has been put forward in a bipartite agreement on energy efficiency signed in November 2011 by the major employers' association of industry and the three main trade union confederations in Italy. The agreement calls for collective bargaining at the local level to include green targets in gain-sharing schemes (Confindustria, Cgil, Cisl, Uil, 2011).

Whether these recommendations are built on evidence, or they are just a vague intuition inspired by policy drifts, is still to be discussed. Yet, experiences of green pay in Italy suggest that including green targets in gain-sharing schemes through collective bargaining is practicable. The three

case studies described in the following paragraphs show how companies use energy saving in the workplace as a way to remunerate workers, and how environmental targets have become a subject for collective bargaining.

3.1. Luxottica: reducing waste through "green pay"

Luxottica is committed to continuously improving its 'green' business processes and practices. In 2011, the company's CEO established a sustainability Steering Group at the Group level, created sustainability cross-functional working groups and launched the Zero Waste Project, with the aim of reducing Luxottica's CO2 emissions by 30% by 2015. The project includes a Life Cycle Assessment and recycling programs for several waste streams (cardboard, office paper, etc.). As a part of the Zero Waste Project, the management and Italian trade unions (Filctem-Cgil, Femca-Cisl, Uilta-Uil) agreed to link a share of the gain-sharing scheme to an index named "zero waste", built on two indicators, related to electricity and paper/toner consumption.

The indicator related to electricity consumption is measured as follow:

Reduction of electricity consumption compared to the previous year	- 0,5%	- 1,0%	- 1,5%	- 2,0%	- 2,5%	- 3,0%	- 3,5%	- 4,0%	- 4,5%	- 5,0%
Pay increase (€)	10	15	20	25	30	35	40	45	50	55

The indicator related to paper and toner consumption is measured as follow:

Reduction of paper and toner consumption compared to the previous year	- 5,0%	- 10,0%	- 15,0%	- 20,0%	- 25,0%	- 30,0%	- 35,0%	- 40,0%	- 45,0%	- 50,0%
Pay increase (€)	2	4	6	8	10	12	14	16	18	20

When savings do not reach a full percentage, the pay increase is set at the higher economic value (e.g.: a 17% reduction of paper/toner consumption is paid 8€). Furthermore, the collective agreement highlights that the percentages of savings are calculated after deducting variations in productivity and costs of energetic resources and materials (i.e. electricity, paper and toner).

3.2. Collective bargaining on green issues at Almaviva

A good practice of social dialogue on green issues is the project "Almaviva Green" by Almaviva, Italy's leading Information Technology provider. The project stemmed from a trade union issue: in 2008, negotiations to renew the company level agreement were blocked on the definition of variable pay linked to performance. With the aim of finding economic resources to be included into the staff bonus scheme, management and trade unions came up with the idea to implement a programme to save money through energy conservation. After a "Green Team" composed by workers' representatives and the management was established in May 2009 to define a roadmap to

make Almaviva a “green company”, the project Almaviva Green was launched. In October 2009, the CEO publicly stated that Almaviva Group became strategically committed to “going green”. One of the main results of the project was that green objectives were included in the gain-sharing plan, along with a campaign of information aimed at increasing environmental awareness among workers. Staff bonus scheme is now built on two independent indicators related to profits (75% of the bonus) and energy efficiency/conservation (25% of the bonus). Objectives linked to financial performance are measured through the ratio between EBITDA (Earnings before interest, taxes, depreciation and amortization) and the value of production, whereas the green part of the bonus scheme is defined by works councils and management at plant level. At the plant in Casal Boccone (Rome), for instance, the parties agreed to save 10% of energy consumption in 2010: if the target is reached, then the 25% of the total bonus is paid. The target is measured as follows:

$$C_{2010} - C_{2009} > 10\% = 25\% \text{ of total bonus;}$$

$$C = [\text{Active electricity power (KWh)} + \text{Methane consumption in 12 months (measured in KWh)}] / \text{Number of job places.}$$

Electricity to be considered includes the one used for air-conditioning, production of hot water and light. A system named SEM-Smart Energy Management monitors in real time energy consumption, enabling the

collection of data, the analysis, and recording of energy-related events, ranging from single buildings to entire property parks, through a safe and profiled access to the portal via the Internet.

3.3. Renner Italia: "Energy saving in the pay packet"

Renner Italia, a producer of wood coating systems, has a markedly environment-friendly inclination. In February 2012, this inclination resulted in the signature of a company agreement through which the management, the RSU (i.e. the works council) and Filctem-Cgil (i.e. the most representative trade union federation in the chemical industry) launched the project "Energy saving in the pay packet". The project is aimed at rationalizing consumption and reducing waste by implementing eco-sustainable policies and lifestyles. It requires all workers to cooperate in order to reduce the consumption of water, electric power, gas and product waste. Workers contribution in saving energy and minimizing waste has a direct feedback in their pay packet, since a share of bonus pay has been linked to green objectives. In 2011, Renner Italia spent 1,566.000€ in energy resources (electricity, gas, water), maintenance (packaging machines, fork-lift trucks, mixing machines), consumables (stationery and printing material, absorbent material and paper, cleaning solvents) and waste disposal. The main costs were electricity (411,000€), and waste disposal (397,000€). Management and workers' representatives committed

to cutting the costs of energy consumption by 10% in three years on a 2011 cost benchmark. They also agreed that 50% of yearly savings would have been paid as part of the annual bonus scheme, by taking into account the incidence of productivity increases and the introduction of new technologies, when the achievement of target is assessed. A joint campaign of information followed the introduction of the green pay: workshops and online training were organized to make the workers aware of the objectives of the agreement and the way to achieve them. Furthermore, a bilateral committee consisting of management and workers' representatives was set up to oversee how the project and the green indicator evolve.

In the case of Renner, green pay is totally variable, as it depends on the amount of savings reached each year. Savings are divided by two, and then by the number of employees:

$$X_{\text{Green Pay}} = [(C2012 - C2011)/2] \,/\, \text{Number of employees};$$

C = costs related to consumption of water, electric power, gas and product waste.

4. Comparison

The first gain-sharing plan is fixed and incremental (Luxottica): each level of savings corresponds to a certain amount of green pay already established by the parties to the collective agreement. The second plan is fixed too (Almaviva), but it works with an on/off system. Accordingly, the parties

define a target of energy savings to be achieved during the year and fix the amount of award to be paid if the target is reached. At Renner, the amount of gain sharing is completely variable and dependent on the savings: at the end of the year, energy savings are divided by two, and the resulting amount is divided by the number of employees.

The three systems are based on the total savings of the company, and individual contribution to energy savings is not measured. Green performance is assessed taking into account the incidence of variation in productivity (Luxottica, Renner), the introduction of new technologies (Almaviva) and the costs of energetic resources and materials (Luxottica).

The indicators used to measure green performance include electricity consumption (Luxottica, Almaviva, Renner), paper and toner consumption (Luxottica), methane consumption (Almaviva, Renner), water consumption and product waste (Renner). According to the taxonomy of employee green behaviours proposed by Lindemberg and Dilchert (Lindemberg, Dilchert, 2013), all the three cases fall within the "conserving category", which encompasses the core actions of pro-environmental behaviours, namely reducing reusing, repurposing, and recycling.

Although in all the observed cases trade unions played a key role in defining and governing the gain-sharing scheme, the input in negotiation of green pay varied. At Almaviva, social dialogue and collective bargaining contributed to shape the company commitment towards environmental issues: discussions/negotiations on staff bonus pay represented the starting

point of a wider programme to make Almaviva a green company. Conversely, in the case of Luxottica and Renner, it was rather the context of CSR policies to prompt collective bargaining on green pay.

In terms of outcomes, each Luxottica employee received in April 2013 an award of 1,585€, linked to the achievement of goals on profits (1,450€), presence (74,00€), and energy conservation (61,00€). The latter part of the award resulted from a 5% reduction in electricity consumption and a 15% reduction in paper and toner consumption in 2012. At Almaviva plant in Casal Boccone (Rome) there was a 45% reduction in electricity and gas costs in three years (2009-2011). In 2010, employees received 288.50€ of green pay. In January 2013, Renner Italia announced that 7,5% of energy and waste related costs were cut in 2012. It was also announced that, according to the agreement of February 2012, workers would receive a 2,000€ bonus arising from the achievement of profits (1,690.922€) and green targets (309.078€). Outputs of the three bonus schemes are summarised in the following table.

Table 1. Percentage of green pay on total amount of award resulting from gain-sharing schemes and amount of savings

Company	Total Award*	Green Indicators	% of Green Pay	Savings
Luxottica (2012)	1,585.00€	61,00€	3.8%	5%; 15%**
Almaviva (2010)	1,648.50€	288.50€	17.4%	15%***
Renner (2012)	2,000.00€	309,07€	15.4%	7,5%

*Gross total amount of award received by each employee
**5% of electricity consumption; 15% of paper and toner consumption
*** Self-estimate considering the data of 45% in three years (2009-2011)

5. Discussion

On the one hand, negotiated gain-sharing plans linked to green targets might be regarded as a form of integrative bargaining (Walton and McKersie, 1965): management and workers have a common interest in saving energy and minimizing waste, as they can share a part of the related savings. Although companies are concerned that an added cost will make them less competitive, costs for energy waste can make them less competitive too, and additional costs for green pay might be completely compensated by (a share of) savings, as in the case of Renner Italia.

Nonetheless, in the three cases, energy saving seems to be used merely as a source to remunerate workers, rather then as a target to be achieved with the contribution (and motivation) of workers. This is more evident at Almaviva, where green pay was the solution to overcome a deadlock in the renewal of the company collective agreement, in a context of budget restraints, and less obvious at Renner, where the gain-sharing scheme is intended to promote a cultural change among employees, as it tries to make them more aware of the importance of saving energy. Representing a small concession in line with the environmental policy of the company, green pay at Luxottica is more likely to be used as an instrument for management to supplement the trade unions' economic requests at the bargaining table.

The percentage of saving to be comprised into gain-sharing schemes and the mechanisms to assess the related environmental performance remain elements of conflict between workers and management. The added value of collectively agreed bonuses against unilateral employers solutions lies in the fact that collective bargaining, as a form of employee participation, increases the possibility that the effect of greening workplaces on wages is positive: as green salary is regulated through collective bargaining, it turns into a contractual arrangement, with trade unions overseeing (independently or in joint committees, such as in the case of Renner) its implementation and the respect of the related terms and conditions. As far as the role of trade unions and collective bargaining are concerned, it is also worth recalling that every year since 2008, governments in Italy have passed exemptions on the income tax and social security contributions for additional wage linked to productivity, profits, efficiency and labour quality, such as incentive pay and flexible working time arrangements. With the aim to promote the decentralization of collective bargaining, these fiscal measures only apply to variable pay resulting from decentralized collective agreements, hence excluding unilateral employers solutions.

Furthermore, expectancy theory applied to incentive pay says that motivation is a function of two factors (Vroom, 1964): expectancy – i.e. the subjective probability of an action or effort leading to an outcome or performance – and valence – i.e. the importance, attractiveness, desirability, or anticipated satisfaction with outcomes. Collective bargaining on green

pay might influence both factors positively: trade unions can indeed demand higher rewards linked to green target, thus increasing valence, and can increase expectancy through instructional and informational interventions, by communicating to employees how their efforts might be effective to save energy and reduce waste. This was the case of Almaviva and Renner Italia, where potentially pay linked to environmental performance is high, and where campaigns of information to engage employee and encourage employees to minimize environmental impact accompanied the inclusion of green objectives in the gain-sharing schemes. Green pay at Luxottica might have a less impact on motivation, as awards are fixed and low. The reason might be that green pay is just a small part of a wider and penetrating environmental policy of the multinational group, which pursues energy efficiency and conservation through different instruments.

Clearly, when it comes to the motivational potential of green pay, there is no evidence from the case studies that workers compensation affects energy conservation positively. The three gain-sharing schemes refer to groups of workers, and collective agreements do not provide for mechanisms to assess how (and how much) individuals contribute to energy savings in response to economic incentives. However, green performance is assessed taking into account the incidence of variation in productivity (Luxottica, Renner), the introduction of new technologies (Almaviva) and the costs of energetic resources and materials (Luxottica). Together with the contribution of trade unions in securing the just distribution of savings, that kind of assessment

might contribute to isolating the efforts of workforce in reaching micro green targets. Accordingly, if the assumption is that energy efficiency at workplace is a function of three variables, i.e. technology, productivity and worker's behaviours, the possibility that green pay should have motivated workers to adopt eco-friendly lifestyles is actual.

Against this argument, one can contend that a fourth factor influences green performance, i.e. work organization resulting from management choices. Nonetheless, when it comes to using energetic resources at a micro level (e.g. use of air-conditioning, paper, toner, light, water etc.), the degree of job control is so high that assuming a residual impact of management choices on green performance is reasonable, even in highly hierarchized organizations.

Finally, a challenge for future research on the hypothesis of green pay implication on worker's motivation will be to control the effect of intrinsic variables, such as psychological and social factors, on eco-friendly lifestyles at workplaces. Other researches, indeed, found that conscientiousness and moral reflectiveness are associated with the voluntary workplace green behaviour of group leaders and individual group members (A. Kim *et al.*, 2014). The interplay between intrinsic and extrinsic motivation should be therefore taken into account.

6. Conclusion

In this exploratory paper I defined and conceptualized the idea of "green pay". After reviewing previous studies on the role of industrial relations institutions in the transition towards a green economy, I showed how and why the ecological conversion of workplaces has a positive impact on wages. As cost savings can be fed into gain-sharing schemes or ring-fenced for investment in environmental improvements, the description of the case studies shows that including green targets in staff bonus schemes is practicable through collective bargaining. Along with health and safety, training and (reduction of) absenteeism targets, green pay contributes to progress towards a dimension of performance assessment that incorporates non-financial elements.

I found that in one case social dialogue and collective bargaining contributed to shaping the company commitment towards environmental issues, while in the others it was rather the context of CSR policies to prompt collective bargaining on green pay. This might be a research question to be better addressed in further research.

Building on the three case studies, I argued that negotiation on green pay might be regarded as a form of integrative bargaining, since management and workers share a common interest in saving energy and minimizing waste. I also put forward the hypothesis that collective bargaining might positively influence the motivation effect of green pay systems. By

implementing more sophisticated gain-sharing schemes, negotiated green pay might be used as a form of extrinsic motivator for workers to adopt eco-friendly practices at work. However, further research should support this argument with empirical evidence.

Considering the topic from a policy perspective, in addition to traditional manufacturing industries, green pay can be experimented in service sectors too, including logistic and transportation (e.g.: eco-driving); restaurant, cafeteria, food distribution and catering services (e.g.: eco-cooking, food waste); cleaning and laundry services (e.g.: amount of cleaning products used, energy and water consumption); health care industry (e.g.: medical products waste, energy and water consumption); public administrations, bank and financial services (e.g.: electricity, water, paper and printing material waste) and many other industries.

References

P. Berrone, L. Gomez-Mejia, *Environmental performance and executive compensation: An integrated agency-institutional perspective*, Academy of Management Journal, 52(1), 103-126, 2009.

Confindustria, CGIL, CISL, UIL, *Avviso Comune. Efficienza energetica, opportunità di crescita per il Paese*, 2011.

R. G. Eccles, I. Ioannou, and S. X. Li, G. Serafeim, Pay for *Environmental Performance: The Effect of Incentive Provision on Carbon Emissions*, AAA 2013 Management Accounting Section (MAS) Meeting Paper, 2013.

Eurofound, *Industrial relations and sustainability: the role of social partners in the transition towards a green economy*, 2011.

Eurofound, *Greening the European economy: responses and initiatives by Member states and social partners,* 2009.

Eurofound, *Industrial Relations and Environmental Protection in Europe. The effects of cooperation between social partners*, 1994.

Eurofound, *Industrial Relations and the Environment in the E.C.*, 1992.

European Commission, *Industrial relations in Europe 2012,* 2013.

European Commission, *Industrial relations in Europe 2010,* 2011.

European Economic and Social Committee, *Opinion of the European Economic and Social Committee on Green Jobs*, 2011/C 48/04.

I. Ioannou, S. Xin Li, G. Serafeim, *The Effect of Target Difficulty and*

Incentives on Target Completion: The Case of Reducing Carbon Emissions, Harvard Business School Working Paper, No. 13-043, November 2012. (Revised August 2014).

A. Kim, Y. Kim, K. Han, S. E. Jackson, R. E. Ployhart, *Multilevel Influences on Voluntary Workplace Green Behavior. Individual Differences, Leader Behavior, and Coworker Advocacy*, Journal of Management, September, 2014.

S. Lindemberg, S. Dilchert, *Measuring, Understanding and Influencing Employee Green Behaviours*, in A. H. Huffman, S. R. Klein (eds.), *Green Organizations. Driving Change with I-O Psychology*, Routledge, New York, 2013.

S. Pearce, *Tackling Climate Change – A new role for trade unions in the workplace?*, Acas, 2012.

N. Räthzel, D. Uzzell, *Trade Unions in the Green Economy. Working for the Environment*, Routledge, 2013.

L. Rustico, M. Tiraboschi, *Employment Prospects in the Green Economy: Myth and Reality*, International Journal of Comparative Labour Law and Industrial Relations, Issue 4, pp. 369–387, 2010.

T. Singer, *Linking Executive Compensation to Sustainability Performance,* The Conference Board, 2012.

P. Tomassetti, *Il dialogo sociale per la green economy*, Prisma Economia-Società-Lavoro, 2, 2012.

V. Vroom, *Work and motivation*, John Wiley, 1964.

R. E. Walton, R.B. McKersie, *A behavioral theory of labor negotiations,* McGraw-Hill, 1965.