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# Public Purchasing and Eco-labelling Schemes : Making the Connection and Reinforcing Policy Coherence<sup>1</sup>

Gilles Grolleau (Corresponding author)  
Université de Bourgogne – Faculté de Science Economique et de Gestion  
UMR INRA-ENESAD  
BP 87999 21079 Dijon Cedex, France  
Tél : 33 3 80 77 24 43 – Fax : 33 3 80 77 25 71  
E-mail : g.grolleau@enesad.inra.fr

Naoufel Mzoughi  
Université de Bourgogne UMR INRA-ENESAD  
BP 87999 21079 Dijon Cedex, France  
E-mail : mzoughi@enesad.inra.fr

Chahira Nouira  
Institut Supérieur de Gestion de Sousse  
Université du Centre, Tunisie  
E-mail : chahira.nouira@lycos.com

**Abstract:** Many governments have promoted eco-labelling schemes as an accurate information-based policy to regulate environmental problems. This paper argues that governments should integrate eco-labelling into their purchasing decisions, both to benefit the environment directly and to reinforce eco-labelling programs as a means to influence private purchasers. Both effects could be quite significant given that governments are large purchasers of goods and services. After reviewing the main barriers and potentialities for greening procurement markets, we explore several ways by which green public procurement can promote the overall diffusion of eco-labelled products.

**Key-words :** Public procurement ; Eco-labelling ; Green markets

**JEL codes :** H57 ; Q 28

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## **Public Purchasing and Eco-labelling Schemes : Making the Connection and Reinforcing Policy Coherence**

“Public authorities should take their responsibility and act as leaders in the process of green management and in changes of consumption towards greener products. If a substantial part of authorities increases their demand for green products this will have an enormous effect on the market of environmentally friendly products and will get industry to increase their production of green products substantially.”

Commission of the European Communities  
(2001)

### **1. Introduction**

The eco-labelling of products is widely considered as an accurate, though partial tool for regulating environmental problems. Eco-labels can help consumers to discriminate between products and indicate those which are less damaging to the environment compared to similar products in the same product group. Many eco-labelling schemes exist world-wide and are intended to provide purchasers with easy-to-use information about the environmental impacts of production methods<sup>2</sup>. By providing useful environmental information, it is expected that demand and hence supply of products produced by methods detrimental to the environment will decrease. This paper argues that governments can increase policy coherence and generate positive effects both on the environment and environmentally friendly markets by using eco-labelling programs in procurement operations. Indeed, governments are significant purchasers of many products, and this market power

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<sup>2</sup> There are many different eco-labelling programs, run by governments, private companies and non-governmental organizations, but all boil down to three basic types of eco-label established by the International Organization for Standardization:

-Type I labels compare products with others within the same category, awarding eco-labels to those that are environmentally preferable through their whole life cycle. The criteria are set by an independent body and monitored through a certification process.

- Type II labels are environmental claims made about goods by their manufacturers, importers or distributors. They are not independently verified, do not use pre-defined and accepted criteria for reference, and are arguably the least informative of the three types of eco-labels.

- Type III labels list a menu of a product's environmental impacts throughout its life cycle. They are similar to nutrition labels on food products that detail fat, sugar or vitamin contents, without value judgements, leaving that task to consumers.

constitutes considerable potential leverage to shape ecofriendly markets. Several governments fail to co-ordinate their action and often do not use their own eco-labelling schemes in their procurement practices. This paper differs from several arguments presented to date by focusing not on the overall greening of public procurement, and instead analyses how greener public procurement can contribute to the development of eco-labelling schemes. We provide circumstantial evidence that making this connection can constitute a win-win strategy.

The plan of this paper is the following. In the next section we identify the main barriers which result in officials failing to incorporate eco-labelling schemes in their procurement practices. In section three, we show that policy coherence can be reinforced by making the connection between public procurement decisions and eco-labelling schemes. We provide data relating to public procurement and eco-labelling schemes in OECD countries. We give examples supporting that countries where eco-labelling schemes are formally taken into account in public procurement policies experience better development of their eco-labelling schemes. In section four, we stress some differences between public and private purchasers and explore different ways in which public procurement policies can support the development of greener markets. Section five concludes the paper, stresses the limits of this study and identifies the need for more in depth analysis of the relationship between public procurement and eco-labelling schemes.

## **2. Why officials fail to incorporate eco-labelling schemes in their procurement practices?**

The procurement survey achieved by The International Council for Local Environmental Initiatives (ICLEI) states that despite the good intentions expressed in several official documents in many countries there is a reluctance to incorporate

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eco-labelling schemes in procurement practices (EPE, 2002). This survey draws on a return of 274 European local authorities out of 4200 and shows the relative importance of criteria used by procurement officials (Table 1).

**Table 1 : Criteria used by officials in procurement contracts according to the ICLEI's survey (EPE, 2002)**

Which contract award criteria do you normally use for procurement and other (e.g. service) contracts?	Application of criteria for contract awarding		
	Frequently	Irregularly	Never
Economy (the most economical offer)	63%	17%	2%
Price	58%	22%	2%
Product-related environmental concerns	17%	49%	15%
Eco-labels	12%	27%	44%
Innovative technology, product durability	22%	39%	22%
Preference for local manufacturer, support for regional/national economy	17%	44%	27%

The weak use of eco-labelling schemes in procurement practices can be explained by the presence of several barriers. The identification of these barriers (EPE, 2002; Warner and Ryall, 2001; EC, 2001) can help to understand why governments fail to effectively incorporate eco-labelling schemes in their procurement policies. The typology suggested by EPE (2002) and completed by our investigations seems representative of current practice and is presented in Table 2.

**Table 2 : Main barriers to greener procurement (inspired from EPE, 2002)**

<b>Main barriers</b>	<b>Related aspects</b>
Awareness and motivation barriers	Lack of motivation to change behaviour aimed at reducing the environmental impact of the products purchased Lack of awareness of the possibilities of public procurement as a political tool Lack of awareness of the environmental consequences of buying a particular product Lack of awareness of existing policy instruments that support the introduction of greener goods Lack of knowledge about the existence of alternative products Lack of awareness about environmental problems in general or lack of willingness to do something about these, especially in countries confronted by more important problems
Economic barriers	Green products are generally thought to be more expensive New products require new operation practices and behavioural adaptations, thus cost time and money New products need sometimes to be integrated into a new product environment as they are incompatible with the product line in use It is uncommon to consider the social or environmental follow-up costs of less environmentally adapted products
Information barriers	Lack of information on environmental policy concepts Lack of data on product contents Uncertainty on how to define a green product Lack of reliable methods for / a lack of consent on the overall environmental impact of a product Lack of concrete product selection guidance
Legal barriers	Over-specific nature of certain legal requirements –many public purchasers find the procurement directives too cumbersome– Lack of specification with respect to the application of environmental purchasing policies Fear of legal conflict with higher authorities (free trade principles) and unsuccessful bidders
Organisational and cultural barriers	Officials' beliefs that green purchasing should be effected at another level instead of their level Implicit purchasing standards and obligation feeling to favour local companies (e.g. electoral pressures to 'buy French') Customary relationships and special arrangements between purchasers and close suppliers No connection between officials in charge of eco-labelling schemes and officials in charge of procurement decisions
Technical barriers	Use of green products that do not fit other equipment or that cause problems when spare parts need to be substituted Green products are rarely or unreliably available Existing contracts with standard suppliers which do not deliver green products Existing budgetary practices, e.g. short-term budgeting time units that do not make long-term saving visible Lack of competencies to design green calls for tenders in conformity with laws and regulations

According to the Green paper on integrated product policy (2001), “systematic awareness raising initiatives” are a key to increasing the likelihood of connecting public procurement and eco-labelling schemes. Indeed, all other barriers are conditioned by the degree of awareness and motivation of officials. Different strategies are possible to increase the awareness and motivation of officials, which can be distinguished according to their motivational underpinnings. While all strategies attempt to achieve the same goal of increasing awareness and motivation among officials in charge of procurement, each strategy is distinct in its means. Some strategies are analogous to “command-and-control” or “top-down” approaches and capitalise on fear, while other voluntary approaches capitalise on

one's sense of social responsibility. Despite such research being beyond the scope of this paper, we stress its necessity in understanding the motivational underpinnings of officials in charge of procurement. In other words, investments in turnkey solutions without concomitant investments in other human and organizational factors can be all costs with few or no benefits.

### **3. Public procurement and eco-labelling schemes : Making the connection !**

Some parts of government manage and promote eco-labelling schemes while other parts of the same government purchase significant quantities of products without systematically taking into account eco-labelling schemes as a useful indicator of environmentally preferable products.

#### ***31. The size of public procurement markets : an opportunity for ecofriendly markets***

Governments at central and sub-central levels and state-owned enterprises are major purchasers of goods and services and can initiate a demand pull strategy, especially in certain product categories, e.g. paper, copiers, printers and computers. Table 3 presents the significant size of government procurement in OECD countries<sup>3</sup> as a percentage of their respective GDP. The ratios provided measure the total expenditure, excluding compensation of employees, for each level of government. These ratios are of great interest because they focus on expenditures that may be directly connected to eco-labelling schemes.

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<sup>3</sup> While the largest opportunities, in value terms, occur in industrialized countries, emerging economies also offer markets with considerable potential.



**Table 3 : Government procurement in OECD countries (OECD, 2001)**

OECD countries	Total expenditures less compensation for each government level (in percentage of GDP)			
	General	Central	Local	Social
Canada	11.47	1.69	8.80	0.02
United States	8.80	3.71	5.11	-
Australia	8.85	2.07	5.81	-
Japan	9.35	1.85	7.59	0.08
Korea	9.13	3.94	5.10	0.09
New Zealand	7.28	3.66	3.80	-
Austria	12.16	2.75	5.70	3.70
Belgium	5.37	2.48	1.95	0.30
Czech Republic	17.03	17.03	6.53	5.18
Denmark	10.63	3.34	7.20	0.09
Finland	9.64	4.22	7.44	1.22
France	9.05	3.24	4.22	1.60
Germany	7.32	1.52	5.39	0.40
Greece	7.29	4.32	0.84	1.30
Hungary	18.31	8.56	7.38	2.05
Iceland	12.92	4.81	5.07	2.11
Ireland	10.08	2.73	7.11	0.12
Italy	7.99	2.72	4.90	0.43
Netherlands	8.96	3.68	4.90	0.37
Norway	11.44	5.61	6.06	-
Poland	10.69	6.55	4.31	-
Portugal	7.24	4.83	2.59	0.13
Slovak Republic	15.34	9.46	2.79	2.98
Spain	8.74	2.63	4.44	1.64
Sweden	14.60	6.25	9.00	0.04
Switzerland	8.60	2.08	6.24	0.12
Turkey	7.47	5.58	1.13	-
United Kingdom	13.08	9.00	3.29	0.10
<b>OECD average</b>	<b>10.32</b>	<b>4.20</b>	<b>5.17</b>	<b>1.09</b>

Before considering the connection between these instruments, let us present the rationale of eco-labelling schemes.

### ***32. Eco-labelling schemes : an instrument to distinguish ecofriendly products***

Basically, eco-labelling schemes promote environmentally friendly choices and consequently can lead to more sustainable production and consumption. An *idealised* eco-labelling scheme includes four stages. First, to maximise the environmental effectiveness of eco-labels, experts select those product categories for which eco-labels would make the most significant improvement to the environment. This selection helps consumers to allocate the limited resources they are willing to spend for the most ecofriendly goods. Second, environmental product criteria are defined using an objective and scientific evaluation, e.g. a full product life cycle analysis determining all environmental impacts from cradle to grave. This complete evaluation seeks to avoid the obscuring of polluting transfers

between different phases of the product life cycle or between environmental fields. Third, products are evaluated according to the previously defined criteria and those which pass are awarded the eco-label. Fourth, product selection criteria are constantly reviewed and updated, notably to ensure that technological advances or the evolution of consumer preferences are taken into account<sup>4</sup>.

Because of their purchasing power and political status, public authorities can influence the eco-labelling scheme by participating in the previous stages. They can define certain “rules of the game” –e.g. participators, verification rules– which can ensure the fairness and credibility of the scheme. This active involvement can therefore reinforce the environmental effectiveness and economic efficiency of the eco-labelling schemes. Table 4 characterises the main national or supranational eco-labelling schemes operating in OECD countries. The level of development of an eco-labelling program can be estimated by combining the number of categories covered and the overall number of products eco-labelled at a given date.

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<sup>4</sup> This idealised description must not occult how eco-labelling programs really work. For example, value judgements are unavoidable in weighing different kinds of environmental impacts (e.g. air pollution versus depletion of non-renewable resources) (Morris and Scarlett, 1996). Moreover, the implication that experts devise scientific criteria underestimates the complicated balancing that should, at least in theory, be done between the greater environmental benefits offered by more demanding criteria and the greater cost and thus weaker consumer take-up also attending high standards.

**Table 4 : Overview of principal eco-labelling Schemes in OECD countries  
(EPA, 1998; Data collected by the authors<sup>5</sup>)**

OECD country	Ecolabel scheme	Year Founded	Governmental involvement	Number of products categories	Number of awarded products
Canada	Canada's Environmental Choice	1991	Governmental	35	126
United States	Green Seal	1989	Private- Non profit	88	300
	Energy Star	1992	Governmental	26	-
Australia	Environmental Choice	1991	Abandoned in 1993 due to industry opposition		
Japan	Ecomark	1989	Quasi- governmental	69	2031
Korea	Ecomark	1992	Governmental	36	219
New Zealand	Environmental Choice	1990	Quasi- governmental	17	55
Austria	Austrian Ecolabel	1991	Governmental	35	150
Belgium	European Ecolabel	1992	Governmental	11	182
Czech Republic	Environmental Choice	1994	Governmental	17	198
Denmark	Nordic Swan	1989	Quasi- governmental	42	350
Finland	Nordic Swan	1989	Quasi- governmental	42	350
France	NF-Environnement	1992	Governmental	6	>300
Germany	Blue Angel	1977	Governmental	88	4135
Greece	European Ecolabel	1992	Governmental	11	182
Hungary	Hungarian Eco-labelling Program	-	-	-	-
Iceland	Nordic Swan	1989	Quasi- governmental	42	350
Ireland	European Ecolabel	1992	Governmental	11	182
Italy	European Ecolabel	1992	Governmental	11	182
Netherlands	Stichting Milieukeur	1992	Quasi- governmental	32	86
Norway	Nordic Swan	1989	Quasi- governmental	42	350
Poland	Ecomark	-	-	-	-
Portugal	European Ecolabel	1992	Governmental	11	182
Slovak Republic	National Programme of Environmental Assessment and Eco- labelling	1996	Governmental	21	26
Spain	AENOR Medio Ambiente	1993	Non- governmental	3	14
Sweden	SIS-Nordic Swan Label	1989	Quasi- governmental	42	350
Switzerland	No generic official ecolabel, but still in discussion with European Union about the European Ecolabel				
Turkey	-	-	-	-	-
United Kingdom	EU Ecolabel Scheme	1992	Governmental	11	182

The level of development of eco-labelling schemes varies across countries. Several factors can explain these differences. One of them, which is central in this paper is the ability of governments to take into account the existence of eco-labelling schemes in their procurement decisions. Germany and Japan are the countries that display the highest development of their eco-labelling programs. Their eco-labelling schemes are frequently considered success stories. As we will argue in the following section, Germany and Japan are also countries that have included eco-labelling schemes in their procurement policies at an early stage. These circumstantial evidence give credibility to the insight analysed in this paper.

<sup>5</sup> Despite we have more recent data for several eco-labelling schemes, we retain the 1998 data of the EPA to allow a credible comparison.

### 33. Making the connection and reinforcing policy coherence : The Blue Angel example

By using eco-labelling schemes in their procurement procedures, it seems rational that governments will reinforce policy coherence and experience a range of benefits, which are developed and illustrated in Table 5.

**Table 5 : Benefits of greening public procurement operations by using eco-labelling schemes (The authors)**

Type of benefits	Principal themes	Illustrative examples
Environmental benefits	Environmental improvement <sup>6</sup>	Since 1986, the Austrian National Bank has made efforts to use recycling paper. These efforts induce a reduction of around 4 cubic meter of wood consumption and decrease of energy consumption around 3,5 MWh per ton of recycling paper instead of conventional paper (UNEP, 2001). In 1990, the German government claimed that the <i>Blue Angel</i> for paints had reduced volatile organic compounds emissions by 40,000 tons (Morris et Scarlett, 1996).
	Environmental leadership	By purchasing eco-labelled products, some parts of the governments can demonstrate and encourage other institutional actors to follow them. Institutional organisations with limited power may band with other organisations in order to increase their ability to influence companies, which are encouraged to reformulate products to meet the eco-labelling standard (FWI, 2003).
	Easier compliance with environmental regulation Demonstration of due diligence	By purchasing environmentally preferable paints, the US Department of Army's Aberdeen Proving Ground have saved the costs of reporting, handling, storing and disposing paints with hazardous substances (FWI, 2003).
Economic benefits	Cost savings	The Austrian National Bank have lowered its costs by 35% for the paper (UNEP, 2001). The US Department of Army's Aberdeen Proving Ground have saved US \$ 1.76 per gallon by using ecofriendly paints (FWI, 2003).
	Greater market competitiveness	Green public purchasing coupled with other efforts such as effective partnership and knowledge development can also encourage innovation and product differentiation, which are critical competitiveness factors. For example, eco-labelling schemes should assist firms in penetrating environmentally sensitive markets. Already, developing countries earn an estimated US \$ 500 million premium from organic exports.
Social benefits	Health and safety	Social benefits can include the improvement of health and safety working conditions, risk reduction for employees of governments, by choosing ecofriendly products. Eco-labelled products are frequently less aggressive for human beings than conventional products (FWI, 2003).
	Environmental and social responsibility	By purchasing eco-labelled products, institutions improve their public image and send a clear signal to private business about environmental responsibility (OECD, 2000). Choosing locally produced products can also promote local development.

Launched in 1977 in Germany, the first governmental eco-label, Blue Angel, is a success story, which is indebted to public procurement policies. More than 4000 products are eco-labelled with the Blue Angel logo, corresponding to 88 product categories. According to Neitzel (1998), 44% of Germans consider the Blue Angel in their purchasing behaviour and approximately 80% of consumers are familiar

<sup>6</sup> "In general, the direct environmental benefit of the eco-label is strongly correlated with its market penetration. This is achieved firstly through both the consolidation and increase in the sales of eco-labelled products, which have a lower environmental impact, and secondly through the improvements their manufacturers have to make in order to meet the eco-label criteria." (E.C, 2002).

with it. Let Edda Müller (2002), the executive director of the Federation of German Consumer Organisations explain how the public procurement has shaped the development of the German Blue Angel program:

*“Realising that the demand of private consumers would be limited, the Federal Environmental Agency during the early 1980’s started to mobilise public procurement (UBA, 1981). In 1984, an ordinance was amended to allow the inclusion of environmental criteria in public tenders. In the following years, public authorities at the local, regional and federal levels issued instructions for the public procurement services, obliging them to include environmentally friendly products in their tenders. In this regard, the Basic Criteria documents of the Blue Angel program were to specify the required quality of a certain product or service. The Federal Environmental Agency also provided additional information. It published a comprehensive handbook on environmentally friendly procurement that was revised and up-dated at regular intervals (UBA, 1987 first edition, 1999 fourth edition). Thus, the Blue Angel got some independence from the availability of Blue Angel marked products in shops. A survey conducted by the Federal Environmental Agency in 1997 found that in 86 percent of governmental institutions, guidelines and recommendations for environmentally friendly procurement were in place (Umwelt, Nr. 7-8, 1997). The Blue Angel criteria, mainly those for office supplies and office machines such as copiers, are regularly introduced as a reference in public tenders (...). “Green” public procurement policy was a major driver for the Blue Angel. It was decisive for the success of all product categories of relevance in the public sector. It also changed the nature of the Blue Angel criteria. The awarding criteria progressively developed towards “technical guidelines” that can be introduced in private and public tenders independently from the physically purchasable product.”*

A similar effect is also widely admitted to explain the great development of the Japanese “Ecomark”. Japan has a ten year history of active green purchasing, especially by using the national eco-label Ecomark (EPA, 1998; OECD, 2000; UNEP and Consumers International, 2002). According to the ICLEI survey :

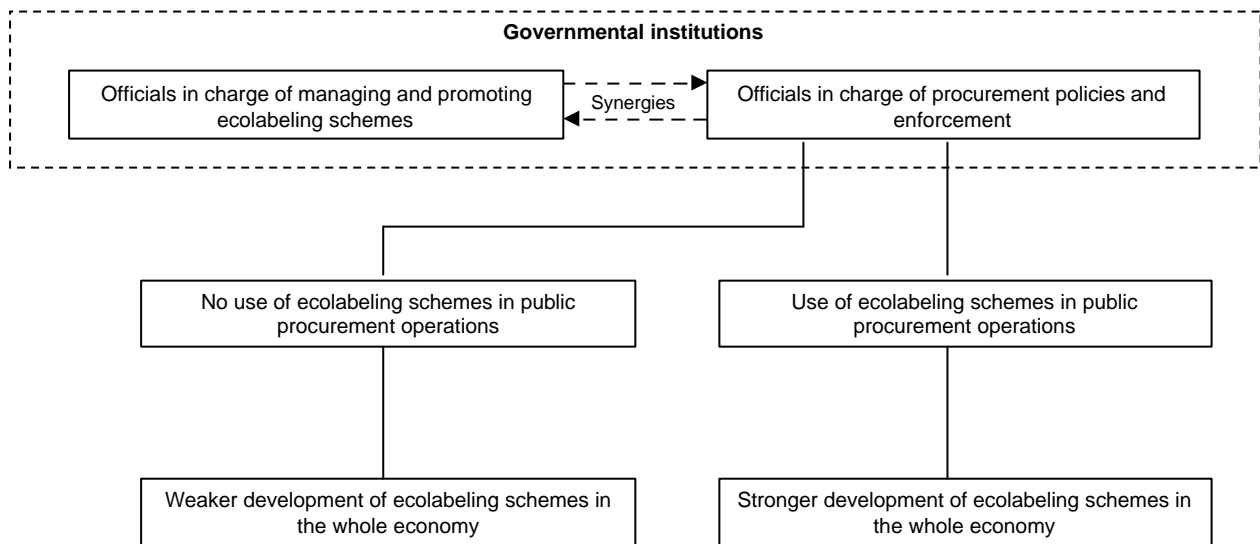
*“No country in the world can present such a wealth of green purchasing activities as Japan does. At national level, activities are mainly conducted by the Green Purchasing network, which also provides tools to support purchasers. On 1 April 2001, the Japanese Government declared green purchasing to be obligatory for all national departments. This obligation is enforced by a positive list of green products, the obligation to set up a policy for each department and to report on achievements made (...). In Japan, green purchasing of public authorities very often is seen as a first step to change general consumer behaviour and mainly concentrates on office materials and electronics. (...) Decisions are mainly based on Japanese eco-label criteria.”*

Conversely, without negating the other factors contributing to the weak development level of the European eco-labelling scheme, article 10 of Regulation (EC) No 1980/2000 states that:

*“In order to encourage the use of eco-labelled products the Commission and other institutions of the Community, as well as other public authorities at national level*

*should, without prejudice to Community law, set an example when specifying their requirements for products.”*

Consequently, collaborative action between governmental managers of eco-labelling schemes and officials in charge of procurement can generate synergies. For example, procurement officials are frequently familiar with conventional performance of products. This knowledge can be useful to establish product categories and define performance criteria for eco-labelled products. The rationale behind the previous affirmation is intuitively clear and described in the Figure 1.



**Figure 1: Expected effects of public procurements decisions on eco-labelling schemes development**

#### **4. How public procurement policies can support the development of green markets?**

At first glance, public and consumer purchasing seem similar. However, there are differences between them under several aspects (OECD, 2001). First, the purchasing officer or agency is not the end-user of the products. Second, public purchasing involves more people participating in the decision. Third, the decision processes obey highly structured and formalised procedures. Fourth, considerable

quantities or values may be involved in public purchasing. The value of potentially contestable government procurement markets world-wide is evaluated at USD 2083 billion, which corresponds to 7.1% of world GDP or 30.1% of world merchandise and commercial services exports in 1998 (OECD, 2002). These differences partly explain why public purchasing can be a major driver of eco-labelling scheme success. Based upon our preliminary investigations, we can distinguish four ways by which green public procurement can support the development of eco-labelling schemes.

#### ***41. Initiating the demand and encouraging manufacturers to produce ecofriendly products***

By providing environmental information on products, eco-labelling schemes aim at increasing demand and supply of ecofriendly products and therefore they are also aiming at inducing an environmental improvement<sup>7</sup>. However, if this mechanism is not initiated, it can generate a vicious circle. Manufacturers often explain their non-commitment to produce ecofriendly products by referring to the lack of demand. For consumers, the low availability of ecofriendly products obstructs them in expressing their willingness to purchase such products. Indeed, the environmental effectiveness of eco-labelling schemes needs a critical mass of potential purchasers to be attractive for manufacturers. Greening public procurement, which offers such a critical mass, can constitute a strong incentives for manufacturers to produce ecofriendly products. The initial success of the Blue Angel is partly attributable to the demand pull strategy of public authorities.

*“A strong impetus to the growing importance of the environmental label was especially given by public procurement. In the German states and in a lot of cities*

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<sup>7</sup> Bougherara et al. (2003) have shown that in certain plausible circumstances, the introduction of an eco-labelling scheme can lead to adverse effects, i.e. an environmental degradation rather than an environmental improvement. An eco-labelling scheme can lead to an increase in purchases of environmentally sustainable products. The net effect on the environment can be worse than the initial situation without eco-labelling, if the environmental unit improvement is compensated by a certain level of over-consumption.

*there are guidelines implemented, which require the inclusion of the awarded criteria for the environmental label as a recommended method to consider environmental aspects in public procurement. The increasing number of labelled products in the 80ies went similar to the implementation of such general guidelines” (Oeser, 1998).*

According to an OECD report (2001), “one of the results of the workshop was to realise that green public procurement can be considered an effective instrument in order to ‘launch’ new green products.” Moreover, public procurement can help risk adverse firms to overcome their wariness to invest in newer ecofriendly technologies.

#### ***42. Reducing the costs of purchasing green products***

Public procurements can increase the demand for ecofriendly products and generate cost reductions in the ecofriendly sector either by enabling the achievement of economies of scale or helping firms to shift along their learning curves. The potential price reduction can result in an increased diffusion of ecofriendly products throughout the economy as a whole.

#### ***43. Increasing market acceptance of green products***

Green products often face wariness of consumers and other private purchasers, notably people in charge of procurement in private enterprises. Indeed the demand side can be risk adverse and unwilling to use the green products launched. They can have doubt, not necessarily about their environmental attributes, but about conventional performance criteria. Governments can play a demonstration role and prove the effectiveness of green products. According to an OECD report (2001), “in the United States, for instance, so called ‘Pilot Projects’ have served to test recycled toner cartridges or chlorine free paper in governmental agencies and have been proven successful in overcoming people’s unwillingness to pay”. Moreover,



governments benefit from economies of scale in influencing and assessing the credibility of eco-labelling schemes. Consequently, public purchasing of eco-labelled products can provide an indirect signal for private purchasers and alleviate problems of asymmetric information, such as adverse selection<sup>8</sup> (Akerlof, 1970).

#### ***44. Attenuating the “assurance problem”***

The environmental improvement generated by the environmental attributes of eco-friendly products frequently has properties of a public good. The properties of non-rivalry and non-excludability imply that the purchase of eco-friendly products does not guarantee to the purchaser a direct and exclusive utility from the environmental improvements generated by his purchase. Because of *assurance problem*, the presumption of neo-classical economics is that public goods will be under-provided by private and decentralised markets. In fact, the agent does not contribute for the production of a public good because he believes that the good will not be produced anyway. The consumer wants to contribute, but fears to get the “sucker’s payoff”. Indeed, the production of certain public goods requires a minimum level of contributions. If the contributions are insufficient, the good will not be produced and the individual thinks he squandered his contribution (Schmidtz, 1991; Grolleau, 2001)<sup>9</sup>. For many products, governmental institutions cover a substantial share of the market and green public procurement can attenuate the likelihood of an assurance problem by sending a clear signal to private purchasers. Because of

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<sup>8</sup> Adverse selection is *ex ante* opportunism due to hidden information. It occurs when a permanent characteristic of the exchanged product cannot be observed by one of the partners. Price is not a good signal of the product’s value because goods of different quality can be purchased at the same price. An adverse selection situation arises when consumers cannot detect a fixed attribute of the product before purchase, while this information is available to sellers (i.e., information is asymmetric). Adverse selection could occur, for example, where some producers provide false labelling about environmental attributes and underlying production practices causing consumers to choose products that do not in fact have the attributes they want.

<sup>9</sup> Consider the example of an eco-friendly car that preserves the air quality by decreasing its polluting emissions. It is obvious that the individual who is willing to pay the premium related to this eco-friendly car will not be the sole one who benefits from his contribution. This situation can lead potential purchasers to adopt free rider behaviour. Moreover a consumer can renounce purchasing an eco-friendly car because he is convinced that his contribution is too weak to induce a perceptible environmental improvement in air quality. This contribution becomes accurate for the individual if he is convinced that a sufficient number of consumers will contribute by purchasing an eco-friendly car.

governmental commitment to purchase eco-labelled products, the individual consumer gets the assurance that his contribution will be useful.

## **5. Limits and conclusions**

In certain markets, governments are huge purchasers and consequently can use their market power to constrain producers to reformulate products according to eco-labelling criteria. Eco-labelling schemes can be more environmentally effective<sup>10</sup> and economically efficient when used with other instruments like green public procurement policies. This preliminary investigation suggests that greater linkages between public procurement and other policies should be fostered to enhance success in achieving complementary objectives. On the one hand, we have showed that public procurement can support the development of eco-labelling schemes. On the other hand, greening public procurement can constitute a win strategy for the government. Of course, this analysis requires more in depth studies to evaluate empirically the leverage effect of green public policies. In order to expand the initial findings of this paper, it would be worthwhile to perform an econometric test between the public expenditures in eco-labelled products and their market share over time. The main obstacles for doing so seem to be the lack of data and methodology to estimate the true size of eco-labelled public markets. Achieving the potential of making such a connection is not a trivial task, but requires meeting key conditions, which can be challenges for policy makers and enforcers<sup>11</sup>. Identifying these key conditions and the ways to meet them also constitutes an important field of research. Lastly, especially in developing countries, governments face serious other problems –e.g. poverty, labour rights and

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<sup>10</sup> We do not explore environmental effectiveness here. This paper is focused on efficiency, through establishing opportunities for improving environmental quality through greater synergy between departments.

<sup>11</sup> To make clear our ideas, let us use an illustrative example. Short planning horizons for public sector budgets can restrain the possibility of using eco-labelling schemes in public procurement. Long time horizons combined with incorporation of “whole life costs” into purchasing decisions can help to ensure there is no confusion between the lowest price and the lowest cost.

corruption -, which compete with the opportunity of making such a connection. In other words, do you need to be rich to be green?

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