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Public Service Reforms and Consumers' Perceptions

An empirical analysis of the socio-economic effects of the new public management reforms on public services in the EU 15 from consumers' perspective

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1. Introduction

In the last three decades increasing the economic performance of services of general interest (SGI) has been one of the prevailing objectives for public management reforms in Europe. Conversely, the strong focus on economics has repeatedly caused criticism. Referring to reforms on network services[1] in particular, one of the major objections has been that the reforms were done at the expense of the core elements[2] of public service provision (Boyne 2003a, p. 23; Clarke 2007). Meaning the reforms had created a type of two-track public service provision that improved the position of well-educated and wealthy citizens but weakened the position of more vulnerable citizens towards these services. Reform promoters have usually rejected these objections arguing the reforms would not only improve the economic situation of the public sector, but also increase the total benefit for everyone.

Against the backdrop of European societies' ever-growing need for social security this argument has become even more vital. The demand for a secure and socially balanced provision of SGI has significantly increased among the European population, while the economic situation of most countries' public sectors' has deteriorated rather than improved. Moreover, the current financial and economic crisis has intensified these developments and put additional pressure on those who bear governmental responsibility and those holding important managing or advising positions in this context. In other words, tight budgets and increasing citizens' demands make it more vital than ever for politicians, public managers and researches to know the effects and consequences that can derive from SGI reform, if they want secure social and economic prosperity among their population. However, despite the huge amount of literature produced in over 30 years of public sector reforms, surprisingly little can still be found concerning the impact of SGI and utility reforms on citizens and even less from a European comparative perspective (Fiorio et al. 2007, p. 2). Indeed, the percentage of reform impact related literature has gradually increased over the last ten years, but compared to other areas of public sector reform research, it is still relatively low developed, particularly in terms of comparable empirical studies. This gap needs to be reduced, especially since some of the reform measures have been determined as essential remedy for the current crisis by the European Commission (EC).

Moreover, today there is a growing consensus among researchers and politicians that citizens need to be more actively integrated into policy design to improve the quality of democratic governance and to increase both accountability and transparency of the policy making process, which in turn will lead to more trust in governance and better policy in general (OECD 2009, p. 13). Stronger citizen integration can be achieved in different ways, such as establishing public discussion forums, implementing more direct democracy elements or analyzing citizens' life situations more extensively and integrating the results in the new policy design process. To produce valid results, the latter requires a solid empirical basis that does not necessarily need to be limited to objective variables. On the contrary, subjective variables may even offer an important additional perspective for the investigation of citizens' life situations. Thus, in terms of public service reforms 'understanding citizens' perceptions and what exactly determines them can be a very useful source of information for governments, regulators, firms and other citizens (Clifton, Díaz-Fuentes 2010, pp. 282-283) to improve processes and outcomes related to economic efficiency while securing adequate social and security standards.

Against this backdrop, this study aims to contribute to the research on the effects of public network service reforms on citizens in the European Union (EU) with an empirical focus on the three network services electricity, gas and telecommunication in the EU 15. Therefore, this study deals with 'new public management' (NPM) reforms of public services and their impacts on the perceptions of European citizens, empirically based on consumers' subjective attitudes, as it seeks to answer the following question: Has the use of NPM reform concepts such as liberalization, privatization and decentrali-

[1] Water and energy supply, telecommunication, post, broadband and transport services.
[2] Social and security aspects such as equality, security of supply, universal availability and accessibility.

zation on public network services led to benefits for consumers that are socio-economically stable or better off at the expense of socio-economically weaker consumer and therefore caused or increased social imbalances in today's public service provision? The question can be transformed into the hypothesis that especially well-educated and wealthy citizens have benefited from NPM market-style reforms of public network services because, e.g., they are able to use the new established market mechanisms to their advantage, while the more vulnerable citizens are often overwhelmed by the new options so that their position vis-à-vis these services has weakened. Since the hypothesis is not only to be tested theoretically against the NPM theory but also empirically on the basis of consumers' subjective attitudes, it is necessary to assume that subjective attitudes are qualified to measure the reform effects on citizens or consumers so that an analysis of certain subjective attitudes is eligible to find supportive or contradictory empirical evidence for the general hypothesis. In case the latter applies, the subjective Eurobarometer survey data can be used together with the objective data from the Eurostat and OECD for a descriptive analysis and a logistic regression model to scrutinize the effects of the NPM market-style reforms of telecommunication, electricity and gas services on consumers' satisfaction with certain service aspects in the EU 15. Given that the search for empirical evidence is primarily based on the finding and subsequent interpretation of relevant effects, it is difficult to formulate the search as one empirical hypothesis that is to be tested. Consequently, it is more appropriate to state that the empirical part searches for supportive or contradictive evidence for the hypothesis that the reforms increased satisfaction among consumers that are socio-economically stable or better off, but decreased satisfaction of socio-economically weaker consumers by using satisfaction as dependent and socio-demographic and regulation indicators as independent variables. The elaborations focus thereby on consumers' satisfaction with service prices, but are complemented by data on satisfaction with quality and information as well as perceptions regarding the fairness of contract.

The study is structured as follows. Section 2 starts with an overview of the basic features and developments in respect to the SGI and their connection to the NPM market-style reforms. It continues with the explanation of the core theories of the NPM and the resulting SGI reform concepts that provide the theoretical base for the subsequent analysis of the argument that is the basis of the research hypothesis. After that, the first part of Section 3 discusses the general reform research regarding universal methods and pitfalls linked to public management reforms. The second part of Section 3 explores the research closer to the topic to determine the possible options for the empirical testing of the hypothesis focusing particularly on the different opportunities of subjective and objective data. Section 4 describes the empirical approach in respect of data, methods and efficiency while Section 5 contains the corresponding empirical analysis of the three service branches in the EU 15. Section 6 summarizes main results and concludes.

Finally, it should be noted that due to limited capacity as well as for rational considerations a detailed consideration of the structural and political developments for all three service branches individually in each of the 15 states is dispensed.

2. European Public Services: Transition and Theory

2.1 Services of General Interest

Services of general interest (SGI) today constitute what was formerly known as public services. They include sovereign government services such as healthcare, justice, security and education, but also network services such as water and energy supply, telecommunication, transport and postal services that require a public infrastructure and are vital or at least of high importance to the population. The term 'services of general interest' is an attempt by the European Commission (EC) to end the ambiguity of the older term 'public services', which was partly a consequence of structural and organizational differences between the EU Member States and partly also a result of a lack of differentiation

regarding the use of specific terminology – the term public services was not only used to refer to services provided by the state, but also as an equivalent for public ownership. Starting with the 'Communication [(COM)] on Services of General Interest' in 1996 (Commission of the European Communities 1996) continuing in the Green Paper of 2003 (Commission of the European Communities 2003) and the White Paper of 2004 (Commission of the European Communities 2004) and ending with the COM for the protocol for the Lisbon Treaty (Commission of the European Communities 2007), it took the EC over ten years to define terminology that differentiates between economic and non-economic services on EU level, allowing for the allocation of competences between the EC and the Member States:

> "*For the first time, the Protocol introduces the notion of services of general interest in primary EU law whereas the current EC Treaty only refers to services of general economic interest. As things stand, two sets of services of general interest can be distinguished for illustrative purposes, in terms of how they are governed by EU rules:*
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> - *Services of general economic interest: the provision and organisation of these services are subject to internal market and competition rules of the EC Treaty since their activities are economic in nature. In the case of large network industries having a clear European-wide dimension, such as telecommunications, electricity, gas, transport and postal services, the services are regulated by a specific EU legislative framework. Similarly, certain aspects of public service broadcasting are covered by specific EU legislation, such as the "television without frontier" directive. Other services of general economic interest, such as those in the area of waste management, water supply or waste water treatment, are not subject to a selfstanding regulatory regime at EU level. However, specific Community rules such as public procurement, environmental and consumer protection legislation apply to certain aspects of the service. In addition, a number of services of general economic interest are also subject to the regulatory framework established by the Services Directive.*
>
> - *Non-economic services: these services, for instance traditional state prerogatives such as police, justice and statutory social security schemes are not subject to specific EU legislation, nor are they covered by the internal market and competition rules of the Treaty. Some aspects of the organisation of these services may be subject to other rules of the Treaty, such as the principle of non-discrimination"* (Commission of the European Communities 2007, p. 4).

In addition to this 2007 definition, the EC recently released a new COM which deals with the rules for the provision of state aid. Partly based on decisions by the European Court of Justice, this latest COM finally offers some more specific rules and definitions (Commission of the European Communities 2012), although this brings no significant changes to the general definition quoted above. To be as clear as possible in this matter: 'services of general interest' (SGI) is a generic term for all services that are classified as of general interest for the population and therefore protected by special obligations. 'Services of general economic interest' (SGEI) are services generally exchanged via the market (e.g. network services such as energy or telecommunication) and therefore usually submitted to EU market regulation, while 'services of non-economic interest' (NES) are sovereign state services such as police or justice.

As already indicated, SGI provide basic services for life and help citizens secure an adequate living standard. Focusing on network services in particular, in most parts of today's world, the provision of energy (gas, oil, and electricity) is almost as important as the supply of water. Moreover, in the developed countries as well as in many of the developing countries network services such as telecommunication, postal services and transportation are fundamental elements of the infrastructure that allow for economic and social development of the communities (Clifton, Díaz-Fuentes 2010, pp. 283-284). Given their high importance for the state and its citizen, SGI are, unlike regular services, classified as of special interest to the public and subjected to specific public service obligations (aspects) such as equality, accessibility, universality, security of supply, and affordability (Clifton, Comín and Fuentes 2005, p. 421). Guaranteeing these aspects, however, often comes at the expense of the state's economic efficiency, which is why providing SGI requires not only a high level of social responsibility and sensibility, but also of economic and organizational expertise. Considering the enormous dimensions, the extremely complex organization and infrastructure which these kinds of services require, it is clear that miss-management or poor organizational structures can easily result in

the loss of huge amounts of public funds or be detrimental to parts of the population or economy that both heavily depend on the service provision. In short, organizing network services is an important and complex task that requires the consideration of economic facts and citizens' and corporates' needs as well as several additional (social and security) aspects that all mutually affect each other depending on their respective weighting or degree of obligation (Van de Walle, Roberts 2008, p. 13).

2.2 Developments in Structure, Science and EC Policy

In the post-war period, former public services had played an important role for the institutional building of the EU Member States. Although there were some differences regarding the respective setting in the legal systems of the states, several common features existed in matters of organization, ownership and development. Thus, mostly similar positions were found regarding the kinds of activities that had been operated and managed by the public sector, the markets that had been protected, and the laws and regulations that had been used to determine how these services should be run (e.g. state monopolies or special privileges). During this period, public service provision was highly affected by state intervention, since the state was, for the most part, the entrusted top-down service supplier. As in most countries, public service monopolies in the EU Member States were accounted for through issues such as public finance, lack of private initiative, market failures, natural monopolies, social justice and prevention of foreign ownership (Clifton, Comín and Fuentes p. 2005). Turning to the differences, Clifton et al. (2005) find some of the more substantial ones in the legal sector:

> *"Public services were defined distinctly and occupied different places in the legal systems and Constitutions of various countries. In France, Italy and Spain, citizens had enjoyed rights to public services since the nineteenth century. In other countries, such as Germany, the Low Countries and the UK, public services had a less marked place in the legal system, but were associated with specific obligations connected to the provision of public services (for instance, accessibility, quality and continuity)"* (Clifton, Comín and Fuentes 2005, p. 421).

Thus, other than SGI today, the term public services did not stand for a single European concept, but for individual concepts that were "*traditionally developed in the Member States with* [their] *own meaning in each Member State.* [Public services] *did not play a role at the European level before the EC did start to apply the internal market rules to sectors affected with a specific public interest*"(Damjanovic 2007, p. 2). Consequently, the first legal changes to the status quo of the post-war period came with the Treaty of Rome (1957), when in the development of the single market competences for market based public services were shifted from the Member States to the EU. Like goods, persons and capital, market based services became subjected to the EC competition policy. However, there was a restriction in Article 90 of the Treaty, according to which the 'services of general economic interests' (SGEI) should only be subjected to competition as long as it did not constrain the legal or practical performance of the particular tasks assigned to them. In practices, this meant no substantial changes until the mid-1970s, when the EC no longer left it to the Member States to make the necessary adjustments for the single market and ignored governmental subventions for public service providers because it feared that any kind of intervention in these matters could obstruct the EU consolidation phase. Besides, Keynesianism, which deemed governmental intervention as an adequate policy tool, was still the dominating economic theory in the western world, and so there were hardly any contrasting voices from scholars or politicians about the way in which public services were governed. This period of non-interference ended in 1974 when the European Court of Justice ruled that Article 86 of the Treaty of Rome, which dealt with the competition law of the single market, was now to be understood in a way that the providers of SGEI had to prove that their exposure to full competition would harm public service provision in order to justify special treatment. This modification, known as the 'rule exemption clause', allowed in legal terms for a new stage of EU policies on public services. It was inspired to a great extent by the new neo-liberal movement (Damjanovic 2007, p. 7) that had formed during the mid-1970s, partly as a result of the first oil crisis in 1973. However, it was the second oil and economic crisis in 1979/80 that tipped the scales for a significant shift of western economic policy objects from Keynesianism to Neoliberalism (Clifton, Díaz-Fuentes 2010, p.

287) impacting strongly the future development of the public sector by building the basis for the new public management and its reforms:

> The Origins of the (New) Public Management
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> During the 1980s, the already difficult economic situation in the public sector facing the aftermath of two severe crises and its resulting fiscal scarcity started to get even worse. The bureaucratic steering[3] of the public sector was suddenly questioned; was it still able to deal with the complex problems deriving from the growing economic interdependence (globalization) or the increasing citizens' demands for effective and service orientated government and public service supply? Moreover, scientists from several disciplines (e.g. political sciences, public administration, economics, psychology and philosophy) showed an increasing interest in the implementation of neoliberal ideas into the steering of the public sector, allowing for public management to become a new interdisciplinary study field (Pollitt, Bouckaert 2004, p. 9). Besides, the question of how to reform the public sector bothered not only most of the politicians and governments of the western countries, their institutions and regional bodies, but also international and supranational institutions such as the EU, the World Bank, the Organization for Economic Cooperation and Development (OECD) and several other actors, e.g. non-governmental organizations (NGOs) and trade partners (Lynn 2006, p. 1 and p. 104). Basically, the perception that the old style of bureaucratic steering was inadequate for tackling the upcoming problems of resource allocation, coordination and control of the public sector in the 21st century (Kettl 2000, p. 16; Kettl 2002, pp. 4-5) in the early 1980s resulted in a wave of public sector reforms that were strongly orientated on the ideas originated from public management. These so-called 'public management reforms' were initiated in the UK and the US, but their ideas were soon seized by many other countries as well as by the EC. Until today, there has been a lot of reforming in many countries across the world and the process still goes on constantly developing itself taking rather heterogeneous forms, so that the reforms differ substantially in their capacities (degree, size, time and level) not only from country to country but also between the countries' local sectors. Consequently, the term public management reform is not easy to define. A very general but workable definition developed by Pollitt and Bouckaert (2004) is based on the approximate explanation *"that public management reform consists of deliberate changes to the structures and processes of public sector organizations with the objective of getting them (in some sense) to run better"* (Pollitt, Bouckaert 2004, p. 8). Similarly, Boyne et al. define public management reform *"as a deliberate change in the arrangement and design of delivery of public services"* (Boyne 2003a, p. 3). So with respect to these two definitions, public management reforms can generally be described here as reforms that go beyond ordinary improvements of the bureaucratic organization because they are based on concepts adapted from private sector management and aim for fundamental changes of structure and process organization of the public sector close to a paradigm shift. Against this backdrop, the new public management (NPM) reform concept is without doubt the most popular public sector reform concept developed so far, because since the beginning of its syntheses in the early 1980s, it has been the dominating concept in the debate about public sector reforms. Recently, however, it seems that the NPM is about to lose this status to a novel public management concept that is usually known as governance and that according to Lynn *"is coming into to use to characterize the domain within which both "traditional" public administration and new public management, or managerialism, are to be found"* (Lynn 2006, p. 10). Thus, the introduction of the new term governance can inter alia be seen as an attempt to allow for a better differentiation between the different versions of public sector management currently known or used. Still, the European SGI reforms of the last three decades are primarily based on the NPM (Prosser 2005), which is

[3] The bureaucratic model is based to a great deal on Max Weber's Bureaucratic Model and partly also on Frederick Taylor's Scientific Management. It was the dominating organizational concept for the public sector in almost all western countries at least until the mid-1980s.

why (public service) market reforms using privatization, liberalization, vertical disintegration etc. are often also known as NPM market-style reforms.

One of the first consequences of the new public management for the SGEI was that the common practice of state intervention subventions regarding public service providers in Europe came increasingly under pressure from the supranational level (EU) as well as from the national level (Member State), already during the 1980s. Across the EU, market oriented policy reforms were gradually implemented and generated several new opportunities especially for the providers of network services. Thus while the opening of the markets through liberalization created new business opportunities by granting access to new markets, privatization opened the door for generous expanding policies, e.g. through national and supranational mergers and acquisitions. These developments cleared the way for several former nation-bound public service providers to transform into some of today's leading transnational corporations which have also become increasingly important for worldwide trade and play an important role for the international economic policy today (Clifton, Comín and Díaz-Fuentes 2008, p. 213). Some examples for Transnational Corporations led by EU firms are Vodafone and the Deutsche Telekom in the communication sector, DHL in the logistic sector, Deutsche Bahn in the transport sector and Électricité de France in the energy sector.

Still, the process of increasing marketization of public service provision was not without criticism. People began to raise concerns about the selling of public property arguing that the increasing marketization might be at the expense of important social and security aspects of public service delivery. When in 1992 the new Treaty of the European Union (the Maastricht Treaty) ruled that from now on the principle of the free market was to be superior to the consideration of integration concerns, critical groups finally demanded a clearer recognition of the distinctive role of public service and called for a general 'European Charter of Public Services'. The critics argued that close monitoring and supervision of the reforms would be necessary in order to avoid quality losses. Moreover, citizens would need some kind of guarantee to ensure their right to adequate public service provision so that commercial interests would not evade general public service obligations and aggravate universal services, their quality, price or the continuity of supply. Besides the Belgian and French governments, the European Center of Employers and Enterprises providing Public Services (CEEP), the European Trade Union Confederation, the Initiative for Public-utility Services in Europe (ISUPE) and the CIRIEC were the key actors regarding these demands, although there were also concerns voiced from the European civil society (Prosser 2005, pp. 153-154; Clifton, Comín and Fuentes 2005, pp. 421-422; Pollitt 2002). In the second half of the 1990s, these developments became significantly stronger so that after several years of neo-liberal supremacy in public sector policy it seemed that the notion of the importance of the protection of citizens' equal rights to service provision was gradually about to show the limits for further marketization in the public sector (Ceriani, Doronzo and Florio 2009).

Not least because of these developments, but also because of the continuous progress of European integration and the considerations regarding the European Social Model, the EC decided to take a more direct interest in these matters by adding several additional points to its public service agenda that had so far been dominated almost solely by the goal of a free market (Héritier 2001, p. 828). An important step was the COM in 1996 (Commission of the European Communities 1996) because it was the first concrete and official document providing information about the new social aspects. The document showed clear linkages between SGI, social awareness and social responsibility that indicated the willingness to take the next step with a scope reaching beyond pure market policy considerations. It determined the protection of citizens' rights and values regarding SGI provision as being of high importance for the social and economic future of the European Union and stressed that further effort was necessary to secure them. A direct consequence of this was the *"major policy decision to introduce SGI as a pillar of social Europe into the Treaty of Amsterdam (1997)"* (Clifton, Comín and Fuentes 2005, p. 420). In order to meet citizens' demands and calm the reform critics and last but not least also because evaluation and output control were considered essential parts for SGI reforms, it

was agreed to monitor citizens' and consumers' perceptions about SGEI provision in the Eurobarometer from 1997.

According to its own words, the EC reached the next level of SGI policy with its Green Paper on SGI in 2003 (Commission of the European Communities 2003) and the consequential considerations in the affiliated White Paper of 2004 (Commission of the European Communities 2004). In the latter, the EC explained its key principles and set out the areas for further work by highlighting the main elements of an approach on EU level, such as the shared responsibility between Union and Member States, the superior role of the subsidiarity principle, and the importance of maintaining high level quality, security and safety. Furthermore the EC pointed out that it aimed to ensure consumer and user rights, increase transparency and provide legal certainty, emphasizing at the same time that competition on the one side and high standards and value protection on the other side were not mutually exclusive:

> *"On the basis of the consultation, the Commission remains of the view that the objectives of an open and competitive internal market and of developing high quality, accessible and affordable services of general interest are compatible. Indeed, the creation of an internal market has significantly contributed to an improvement in efficiency, making a number of services of general interest more affordable. In addition, it has led to an increase in choice of services offered, as it is particularly visible in the telecommunications and transport sectors"* (Commission of the European Communities 2004, p. 7).

So the EC considered the role of values as important for SGI provision, but was also of the opinion that, in the case of SGEI, the duty to guarantee and protect these values could be best fulfilled by market oriented strategies. In this respect, the considerations in the White Paper (2004) are in line with the NPM reform package for the network services, which is based on liberalization, vertical disintegration and privatization and has been *"more or less advocated in similar ways by the EC and by some international organizations, such as the World Bank, the OECD and other influential actors* […] *with the proviso that officially the EC is mute on ownership (but highly suspicious about the role of the state-owned incumbents)"* (Ceriani, Doronzo and Florio 2009, p. 3). The latter refers to the fact that, although it is left to the Member States to decide whether SGEI providers are in public, private or mixed ownership, there are precise rules in each SGEI sector regarding the legitimacy of state aid to secure an adequate service provision (Damjanovic 2007). After the White Paper (2004), these rules have been further refined inter alia by the additional new "service directive" (European Commission 2006) that basically aimed to facilitate the freedom of establishment and the freedom to provide certain SGEI across the EU and has been adopted in December 2006. Moreover, the EC published a further communication in 2007 (Commission of the European Communities 2007) to introduce the protocol on SGI accompanying the Lisbon Treaty (2007). An important point here was the clarification of competences between the EU and the Member States. Indeed, the EC made clear that its competences are limited to the area of SGEI and that NES, although they may be subjected to other rules of the Treaty, are not covered by any internal market or competition rules of the Treaty. However the EC also argued that for the question whether a service is economic or not, *"*[t]*he answer cannot be given a priori* [but] *requires a case-by-case analysis"* (Commission of the European Communities 2007, p. 4) orientated on an approved list of criteria by the ECJ. Further, the EC started an investigation in the area of social services and healthcare to prove to what extent the nature of their delivery is market based and would therefore fall under the EC's competence. As a result, despite all claims by the EC that it will not interfere in NES provision, SGI competences seem to shift more and more into the hands of the EC simply because their classification changes from NES to SGEI. Indeed, the recent COM on state aid (Commission of the European Communities 2012) brings at least some more clarity in this matter, since it offers the Member States some precedents and guidelines which can generally be interpreted in the expected, more competition friendly way. However, since there are still no

> *"specific Union rules defining the scope for the existence of an SGEI, Member States have a wide margin of discretion in defining a given service as an SGEI and in granting compensation to the service provider. The Commission's competence in this respect is limited to checking whether the Member State has made a manifest error when de-*

> *fining the service as an SGEI (7) and to assessing any State aid involved in the compensation. Where specific Union rules exist, the Member States' discretion is further bound by those rules, without prejudice to the Commission's duty to carry out an assessment of whether the SGEI has been correctly defined for the purpose of State aid control"* (Commission of the European Communities 2012, 46).

In short, after initial reluctance in the early years of the European Community, the EC has constantly expanded its influence on SGI, uploading competences to the EU level over the last three decades. While apart from their subjection to a few general EU guidelines, (officially) no competences have been gained on NES, vast competences have been gained on SGEI that are theoretically almost entirely subjected to the internal market and competition rules. 'All possible exceptions for SGEI from these rules need to be in accordance with EU regulations and are only permitted in certain cases' (Article 86 (2) of the Treaty). This applies in particular to the network services that have since the 1990s been subjected to the EC's liberalization effort and its specific sector policies. In 2007, the EC declared *"the gradual opening up of these sectors to competition* [that] *went hand in hand with the definition of a number of public service obligations for each sector, covering aspects such as universal service, consumer and user rights and health and safety concerns"* (Commission of the European Communities 2007, p. 7), as an overall successful model for the combination of SGI and the development of the single market that meets efficiency criteria as well as the public's social and security demands.

To conclude: The paradigm shift in economic theory in the early 1980s, which was partly due to the two severe economic crises, was one of the main reasons for the development of the new public management. The new management together with the increasing European integration was in turn one of the main drivers of the significant re-organization of the European SGI provision, but its ability to improve social welfare is still controversially discussed. According to the critics, the reforms are a direct threat to a socially just service provision because they actively further the cleavage between socio-economically weaker and stronger citizens. However, to see if these concerns find real theoretical support, it is necessary to take the discussion to the next level and concentrate on the basic theory behind the new public management and the arguments it can provide.

2.3 New Public Management Theory

The NPM is neither a self-standing theory nor a singular reform strategy, but a concept with different theoretical and empirical influences (Schedler, Proeller 2009, p. 44). Its theoretical roots are most notably seen in the 'public choice theory', 'the managerialism' (Aucoin 1990, p. 115) and the 'new institutionalism', although important influences from several other theories[4], such as the 'classic', the 'neo-classic' and the 'policy analysis' (Grüning 2000, p. 30) or even the 'system theory' can be noticed as well. The range of ideas behind public management and NPM is broad, and in the last decades different actors have highlighted, elaborated and argued about different aspects of the framework (Hood 1991, p. 4). In the early 1990s, Christopher Hood first identified seven key elements in different doctrines of several OECD countries and in the international public management discussions that were labeled as NPM. However, since Hood himself argues that *"not all of the seven elements were equally present in all cases; nor are they necessarily fully consistent, partly because they do not have a single intellectual provenance"* (Hood 1991, p. 4), it makes sense here to consider a more actual summary of key elements instead, for example the one by Christopher Pollitt (Table 1, p. 11):

[4] For a detailed overview see e.g. Reinermann (2000).

1.	*"A shift in the focus of management systems and efforts from inputs (for example staff, buildings) and process (for example teaching, inspecting) towards outputs (test results, inspection reports) and outcomes (standards of literacy in the community; institutions which repeatedly fail inspections being closed down)*
2.	*A shift towards more measurement and qualification, especially in the form of systems of 'performance indicators' and/or explicit 'standards'.*
3.	*A preference for more specialized, 'lean', 'flat' and autonomous organization form rather than large, multi-purpose, hierarchical ministries or departments.*
4.	*A widespread substitution of contracts (or contract like relationships) for what was previously formal, hierarchical relationships.*
5.	*A much wider-than-hitherto deployment of markets (or market-type) mechanisms (MTMs) for the delivery of public services.*
6.	*Alongside the favoring of MTMs, an emphasis on service quality and a consumer orientation (thus extending the market analogy by re-defining citizen-users of public services as 'consumers')*
7.	*A broadening and blurring of the frontiers between the public sector, the market sector and the voluntary sector (for example through the use of public-private-partnerships and/or contracting out)*
8.	*A shift in value priorities away from universalism, equity security and resilience, and towards efficiency and individualism"*

Table 1: Key Elements of NPM Reforms cited from (Pollitt 2003, pp. 27-28).

The points in the table show clear linkages to the theoretical roots that predict in contrast to the bureaucratic steering model a far more economic and management orientated approach to the steering of the public sector. Nevertheless, there is a high diversity of sometimes even logical contradictive ideas under the NPM label (Pollitt 2007, p. 2), which fragmented nature is not only due to different concepts or ideas, but also to its adaption to the different kinds of administrative structures in different countries. To explain the reform measures relevant for public service provision and moreover, to determine the theoretical basis for the argument, subsequent the focus is on the importance of the following three theories:

- the Public Choice Theory,
- Managerialism,
- and the New Institutionalism.

2.3.1 The Public Choice Theory

Based on different parts of the economic theory, the public choice theory basically transfers the theory of rational behavior in an open market system from economic theory to political phenomena (Schedler, Proeller 2009, p. 48) in a closed system. Thus, in the given context of public sector reforms, the public choice theory builds on the assumption that bureaucrats and politicians are primarily driven by self-interest rather than by public interest. Consequently, they seek more to enlarge their budget and influence than concentrate on an effective and efficient steering. According to (Boyne 2003a, pp. 6-7), public choice theory identifies three possible causalities that promote this kind of behavior and therefore lead to a lack of efficiency and effectiveness in the public sector. The first one is the monopolistic structure of the public service market which protects public agents and organizations from the pressures of competition. Following the neo-classical economics that see competitive market structures as a factor that enhances performance in the private sector, the public choice theory proposes the creation of adequate market structures for the closed public sector to change the incentives of public agents towards the maximizing of public welfare. The second cause for inefficiency is seen in the lack of performance information. Unlike the private sector the public sector misses adequate measures to assess the performance of its agents and the quality of the produced services. The problem is system-inherent because due to the lack of real markets, there are no unambiguous performance indicators in the public sector that would allow an easy monitoring and controlling of public servants (Boyne 2003a, p. 7). So besides the establishing of market structures, the creation and implementation of adequate performance indicators in the public sector is believed by public choice theorists to lead to more transparency and less information asymmetry, and therefore to an improved performance in the public sector. Finally, public choice exponents claim that the negative effects of monopolistic market structures and lack of performance information are connected with the generally large operational size of many public administrations (Boyne 2003a, p. 8).

Tullock argues that with growing size of bureaucracies, problems with coordination and control grow disproportionally, and that there is a point where the costs of dealing with these problems outweigh the benefits of an enlargement (Tullock 1965, p. 51). Growing sizes of administrations is also seen as compound with a gradual loss of speed and flexibility of public operations (Downs 1967, p. 160). Furthermore, Niskanen states that it aggregates the degree of monopoly power, and the problems that come along with it (Niskanen 1971, p. 55). In order to solve these problems, the public choice theory wants these structures to be forced open through the creation of more decentralized and size reduced organizations. A swift look back to the key elements of NPM reforms found by Hood (Hood 1991, p. 4) and Pollitt (Pollitt 2003; Pollitt 2007, pp. 27-28) shows the relations between the theoretical explanations and the practical implementations of the public choice theory. The shift to more competition in the public sector, respectively marketization, as an answer to the monopolistic structure problem, the explicit standards and performance measurement as well as a stronger emphasis on output control or the accountability for the results as solutions for the problems due to the lack of information, the decentralization and disaggregation of organizational structures to prevent problems caused through a too large size of the administrations are some examples here.

2.3.2 Managerialism

Before the central points of managerialism can be uncovered, it is necessary to point out that the term itself unfortunately is far from being clear and therefore seems to lack a sound and consistent definition. For example, managerialism is used by some as a label for management orientated ideologies (Pollitt 1993, p. 1), while others connect it with the uncritical transfer of private management concepts to the public sector (Grüning 2000, p. 383). Again others use it as a critical statement towards humanistic and organic management concepts (Parsons 1997, p. 452 and pp. 543-544). Grüning concludes in his elaboration that the term managerialism does not meet the requirements of a useful definition and that it therefore can hardly be used to explain theoretical parts of the NPM (Grüning 2000, p. 383). However, since there is no adequate term, the following concepts will be referred to as managerialism according to the definition by Christopher Pollitt (Pollitt 1990, p. 28 and pp. 48-49; Pollitt 1993, pp. 2-3), who describes managerialism as an incoherent ideology that marks the use of different doctrines and practices, so-called management principles, towards specific problems. From this perspective, the idea behind the concept can indeed be described as the use of adequate management techniques to improve the capacities of the public sector (Schedler, Proeller 2009, p. 50). The concept focuses first and foremost on the steering of public organizations, and is therefore dealing with micromanagement which basically aims on the interior modernization of public institutions, although it requires also measures on the macro level. In order to improve the steering of the public sector, it is suggested to increase executives' freedom of action, for example through measures of decentralization and privatization. Furthermore, the introduction of improved management techniques, like the "POSDCoRB" (planning, organizing, staffing directing, coordinating, reporting and budgeting), is used to raise productivity in the public sector, and goes hand in hand with professionalization of further public management areas (Ritz 2003, pp. 158-159). Simply speaking, the influence of managerialism on the NPM from this perspective is the consolidation and emphasis of management aspects in the public sector expressed through assimilation of several management theories and techniques from the private sector (Schedler, Proeller 2009, p. 50), or by privatization.

2.3.3 The New Institutionalism

The new institutionalism (Coase 1937) combines a plurality of coexisting approaches that, in contrast to the complete rational neo classical approach, are based on the assumption of bounded rationality. Therefore, neo classical assumptions of a free market with full competition and unrestricted mobility of goods are exchanged for the concept of the real existing markets and the institutions that exist and act within them (Reinermann 2000, p. 78). Basically, three approaches have been developed that, even if they belong to different roots, are similar in their main points: (1) the transaction costs theory, (2) the principal agent theory, and (3) the property-rights theory. All three approaches presume the individual utility maximization without moral concerns (opportunism (Williamson 1975, p.

7)) in a situation of incomplete or asymmetric information (insecurity), as well as they imply the predictability of all relevant alternative options (Schreyögg 2008, p. 60).

2.3.3.1 The Transaction Cost Theory

If the use of markets produces costs, it is wise to try to hold these costs as low as possible (Coase 1937; Williamson 1975). Thus the transaction cost theory aims to find the organizational structures between hierarchical and market organization that produce the lowest cost when fulfilling the respective task. Transaction costs can be divided into so-called *ex ante* and *ex post* costs, where the first include all costs that are necessary to arrange the exchange, and the second include all costs that follow from it (Picot, Reichwald and Wigand 2003, p. 50). The theory assumes that the reasoning powers of the involved parties are subject to bounded rationality and that they behave in an opportunistic manner for the case of imperfect or asymmetric information. The latter is thereby seen as a cause for insecurity in the contractual relationships which influences the transaction costs. Furthermore, transaction costs are affected by environmental factors like the just mentioned insecurity (e.g. about the intention of the partner), the frequency of transactions (single or standard task), the specificity (of e.g. the human capital) and the degree of separation (e.g. one or more production steps). Hence, organizations only have a right of existence if they solve the motivation and coordination problems compound with goods and services internally in a cheaper and superior way than the free market. To select the ideal form out of the multitude of possible organizational structures, ranging from total hierarchy to fully market based, all assumptions above mentioned must be considered. Besides organizational structures it is also common in this context to speak of three special contract types (Schoppe 1995, p. 155). The first is the classical contract where the free market is the form of organization. The model is used for standard, non-specific, commonly available goods that can ideally be delivered through the open market because competition prevents opportunistic behavior. The second is the neo-classical contract, which is basically a three-way coordination. The trade relations are casual, the traded goods are semi-specific and the partners are normally interested in the continuing of their business relations, but because there is a chance for opportunistic behavior on the one side and because a hierarchical organization would be too expensive on the other side, the arbitral court is introduced as a third player to conciliate in the case of possible arguments. The third model is the relational contract that deals with regular trade relations on semi- and highly specific goods. The high interdependence usually prevents opportunistic behavior due to the high amount awarded for damage claims and uses a two-sided coordination structure for semi specific goods, but a hierarchical structure for the high specific goods. In summary, if the specificity is low, the market solution usually produces the lowest transaction costs, while coordination goes together with most semi-specific goods, and hierarchy with highly specific goods (Picot, Dietl and Franck 2008, p. 16 and pp. 56-65).

2.3.3.2 The Principal-Agent-Theory

The principal-agent theory analyzes the relationship between the principal and the agent, for example between politician (principal) and public servant (agent), from an economic perspective. The assumptions are that both parties are utility maximizers and therefore tend to behave in an individualistic and opportunistic way. Their relationship is affected by different interests and information-asymmetries. To gain economic advantage, the principal delegates the task-related property rights to an agent (professional) who makes the decisions influencing his own and the principals' utility level (Schoppe 1995, p. 180). The agent's specific knowledge puts him in a superior position towards the principal, giving him some leeway for opportunistic behavior which causes so-called agency-problems for the principal: (1) the 'hidden action' problem, which describes the lacking observability of the agent's behavior during fulfillment of the task; (2) the 'hidden information/characteristics' problem, meaning a situation where the principle is able to monitor the agent, but due to the lack of professional knowledge cannot assess his performance, which causes the danger of opportunistic behavior by the agent (moral hazard); (3) the 'hidden intention', which deals with the possibility that the agent lies about his degree of qualification during the contract bargaining and which can lead to the danger of adverse selection (selecting a non-qualified agent). Finally, there is also the 'hold up' problem,

meaning the agent discovers and uses a leeway for opportunistic behavior after the contract has been closed (Schreyögg 2008, p. 66). In order to lower the risks of agency-problems, the principal can take several measures such as arranging controls, declaring sanctions, developing information systems, or creating incentives, e.g. through gain sharing, that keep the agent from behaving opportunistically (for a summary compare: Dietl 1993). However, all measures are costly and therefore, the principle-agent-theory focuses on finding agreements which not only minimize the risk of deviation by the agent, but also minimize the agency-costs (Schreyögg 20008, p. 67).

2.3.3.3 The Property-Rights-Theory

The property-rights-theory (Schreyögg 2008, pp. 63-66) focuses on the disposal of resources and on different regulations regarding the allocation of property rights. "*Property rights are an instrument of society and derive their significance from the fact that they help a man form those expectations which he can reasonably hold in his dealings with others*" (Demsetz 1967, p. 347). In other words, property rights are socially constructed competences of economic subjects on goods and resources which are generally transferable. Their form and extent can vary substantively, however, complete specified property rights consist of a cluster of four single rights: (1) the right of use (usus), (2) the right to earn income from them (usus fructus), (3) the right of changing their form and substance, and (4) the right of transferring them to others (Picot, Dietl and Franck 2008, p. 46). According to the form of organization, property rights are distributed differently. In public institutions, the distribution is normally separated such that the administrative managers have the right of coordinating strategies, organization and control which comply with the right of use and the right of change, while the politicians and the public have the right of transfer and the right to use potential gains that derive from the use (Schoppe 1995, p. 144). Furthermore, it is possible to transfer rights completely or partly to the actors, or else a right can also be transferred to one or more individuals. In the latter case, if the right is split between several actors it is common to speak about diluted property rights, while in contrast if it is transferred to a single actor or a small group this is called concentrated property rights. Diluted property rights carry the danger of external effects, meaning that the actions of one actor can lead to an uncompensated diversification of use for the other individuals involved. These effects can be positive if they lead to improved gains for the other actors, or negative if they reduce the gains for them. According to the property-rights-theory, the occurrence of external effects can be reduced if the consequences of their actions are clearly assigned to the respective reasonable actor (Picot, Dietl and Franck 2008, pp. 47-56; Schreyögg 2008, p. 63; Schoppe 1995, pp. 137-147). Against this background, the property-rights-theory is interested in the different possible arrangements of these property-rights (degree of specification and dilution) and their impacts in order to find the ideal economic distribution structure for the particular situation (Milgrom, Roberts 1992, p. 307).

2.3.3.4 Conformance with the NPM

The three different approaches of the new institutionalism offer several conformances with the NPM (Reinermann 2000, pp. 85-94). Regarding the transaction-cost-theory, NPM reforms consider the choice of the right structure between hierarchy and market organization by analyzing the parameters of specificity, relevance, insecurity, and the frequency of transaction. The quintessence of this is the principle of the enabling state that concentrates on its principal duties guaranteeing task fulfillment through external actors by using decentralization on the macro and on the micro level. In a further line with the transaction-cost-theory are the concepts of task reviews, outsourcing, privatization, center-concepts, citizen centers and self-services (Thom, Ritz 2006, p. 21). The principal-agent-theory applies to two subject areas of the NPM. The first is the facilitation of the administrative culture, e.g. through the development of general principles and strategies, the implementation of objective orientated incentive systems, and motivation and qualification coaching of the staff. The second is the reconfiguration of information structures and systems towards a clear contract management with preferably operative objectives plus an adequate controlling and review system. In summary, principle-agent-theory and NPM both exhibit measures that improve and objectify the quality of information between the participating actors to discover and prevent a possible divergence of interests between them (Reinermann 2000, p. 92). Similarities between the property-rights-theory and the

NPM are primarily seen in the effort to create more clearances for the public servants to stimulate self-dependent action and, at the same time, to let them deal with the consequences of their own actions. The pooling of profession and resource responsibility, the budgeting that allows free resource disposal as well as the contract management that only sets the goals to be achieved without fixing the way how this is done, are essential elements of the NPM that are based on the property rights approach (Thom, Ritz 2006, 19;Reinermann 2000, p. 89).

2.4 New Public Management Reforms and Services of General Interest

Given the problems and solutions discussed in the NPM's basic theory, it is not astonishing that the typical NPM SGI reform package is mainly built up on the concepts of privatization, decentralization and liberalization, the effects of which are therefore also at the core of the argument regarding social costs or benefits. In the following, the relevant forms of the concepts will be briefly explained and then the different theoretical arguments will be considered.

2.4.1 Concepts

Privatization

In general, privatization describes the transfer of property rights from the public to the private sector. Three forms can be distinguished: First, 'material privatization', which describes a model in which the state sells shares or even entire state-owned enterprises to the private sector; second, 'task or functional privatization', which goes hand in hand with liberalization because it means a task previously performed by a state monopoly (e.g. public network services such as postal services, communication, waste, water) is taken over by the private sector and subjected to full or partly-regulated market competition; and third, 'organizational privatization' or rather 'corporatization', which describes the transfer of a public organization to the legal form of a private organization, such as a limited company or a corporation. Finally, there are also mixed forms between these three types, such as 'public-private-partnerships' (PPPs) like a school that is built by a private investor and rented by the state (Megginson 2000).

Decentralization

Decentralization is an ambivalent concept because it is exercised in several different disciplines. It usually implies the separation of centrally organized processes, organizations or structures into smaller decentralized units. Now, in the political context of the NPM, the following forms are important: (1) decentralization as a transfer of central government tasks to subsidiary levels, or (2) 'vertical disintegration' or 'divesture' as the outsourcing of upstream and downstream production stages of a product into legally independent companies with separate management, and (3) 'unbundling', which *"is the separation (unbundling) of non-competitive segments, which generally have inherent natural monopoly features, from those that are potentially competitive (such as production, supply and maintenance)"* (Ceriani, Doronzo and Florio 2009, p. 13).

Liberalization and Deregulation

Liberalization is used here in a politico-economic dimension and principally means simply the opening of the markets, enabling other actors to become market participants. Although it is not the same, liberalization is frequently used interchangeably with deregulation because in broader terms deregulation also serves as umbrella term for the implementation of NPM-style reforms. Strictly speaking, however, deregulation means eliminating or reducing any kind of government regulations, thereby moving towards are free market model, while liberalization refers only to the opening of the market, meaning it allows market access and disposes of customs, while other regulations such as quality, consumer rights etc. usually remain untouched.

The Customer Approach

After the basic forms of the three main market measures have been defined, there is one more concept that needs to be considered: the customer approach. Unlike the three other concepts, the cus-

tomer approach is not about (re-)structuring the outside conditions, structures and forms, but about the inside strategic management and orientation of public service organizations. Hence, the customer approach may be seen as a slightly different fourth reform concept that is in several ways connected to the first three, being partly their cause but also their consequence. The customer approach in the public sector describes the transfer of customer oriented management concepts from the private to the public sector. It can be differentiated between an active and a passive side. While the latter is simply the result of the progressing implementation of liberalization and privatization, the development of the active part was mainly a response to the massive legitimacy crisis of the public sector in the early 1980s that was primarily due to the fact that citizens, after experiencing a stronger customer orientation in the private sector, were no longer satisfied with the status quo of service provision in the public sector. Given that the cause for the crisis was substantially seen in the public sectors' comparatively poor developed customer orientation, a stronger focus on customers on the part of the public sector was seen as an obvious solution to the problem by many. Thus, it is not astonishing that a stronger customer orientation of the public sector and, accordingly, an improvement of the service quality towards the customers are counted among the substantial strategic goals of the NPM (Haque 1999; McClendon 2000, pp. 1-3; Schedler, Proeller 2009, pp. 67-71). Like the three other concepts, the theoretical foundations of the customer approach can be found in the public choice theory and managerialism, but also in the participatory approach that concentrates on the reinforcement of political and especially democratic aspects. Consequently, most NPM customer approaches focus on an increased opening of the public sector towards the differentiated concerns and demands of the citizens regarding the reduction of bureaucratic deficits, such as overly standardized methods of service delivery ('one size fits all'), insufficient problem-solving-capacities, and the waste of public funds (Boyne 2003b, p. 396). Two of the most common concepts in this context are the 'totally quality management' (TQM) and the 'management by competition' (MbC), which both earmark the approximation towards private sector conditions for the public sector in order to achieve their aims (e.g. higher quality of products and services, increasing productivity and higher rate of citizen participation) (Naschold, Bogumil 2000, pp. 89-90).

2.4.2 General Discussion: Markets vs. Bureaucrats

Taking the three NPM structural reform concepts together with the customer approach, their advantages and risks for SGI organization and provision in comparison to the old bureaucratic form are discussed in this part. Starting with the weaknesses of the old model of public sector organization that already became partly apparent during the discussion of the basic theory and furthermore have been identified by several studies (e.g.: Gore Jr 1994, OECD 1996, Barrett, Greene 1995) as reasons why customer oriented market and structure reforms should be implemented in the public sector, the following points can be found by Broekmate, Dahrendorf and Dunker (2001) and Engelhardt (2001):

Problems	Reasons
• **Low economic efficiency**	• Missing competition • Missing incentives • Opportunistic behavior
• **Underdeveloped awareness for economical handling of resources**	• Low economic expertise • Hardly need to fear consequences • Low probability of national bankruptcy
• **Vague objective targets and concepts**	• Complicated assignment of competences • Low degree of personal responsibility
• **Bad reputation/image of the public sector** • **Low chances for citizens participation**	• Missing customer orientation • *One size fits all* solutions
• **Complex, inefficient organizational structures**	• Form of organization exceeds reasonable size and degree of centralization

Table 2: Selected Problems of Bureaucratic Steering.

As can be seen in Table 2, the NPM-Style reforms seek to solve the problems of bureaucratic steering by opening the previously closed systems by liberalization to create new markets with competition. According to the theory, markets and their inherent competition are the key in the concept for SGI provision because they are assumed to terminate most of the negative effects of bureaucratic steering and to lead to more efficiency, quality and product improvements as well as decreasing prices, although given that SGI markets are far from ideal, additional regulation is required to achieve the positive effects.

Moreover, open markets alone are not enough since in order to exhibit the full potential of competition, privatization[5] is needed to achieve higher efficiency of corporations and employees because it is seen to stop the negative effects associated with public employment. Depending on the chosen form of privatization, additional benefits can be extra revenues for the state together with cost reduction, the streamlining of administration, and higher efficiency gains through private organizational and management forms. Privatization allows the state to cut costs by enabling it to employ people under market conditions instead of those that are mandatory for people working as official public servants, which is the basic condition to gain the full benefits of market and competition. Finally, it permits the state to concentrate on the core tasks such as education, justice and welfare and gives it the option to raise profits from being a shareholder of privatized enterprises while creating an additional chance for consumer benefits in the form of lower prices or better service as the result of competition. Through the additional use of decentralization in SGI provision, the state is able to form more competitive segments out of its corporations, which increases the effects of competition because it allows looking for better up or down streamers in the production/supply chain. Furthermore, decentralization can create higher transparency, which usually leads to higher personal responsibility and allows a better screening for weaknesses.

Additionally, attention to customers allows adapting service provision more directly to citizens' needs by offering a broader choice and more individual, demand oriented solutions that increase citizens' satisfaction with and acceptance of the public service sector as well as their personal sovereignty. That way, additional personal responsibility and competences are directed to the individual (public) managers, reducing the role of elected agents, politicians and legislators. As a further consequence, customers' satisfaction becomes more important to measure public administrators' performance. Thus, the stronger focus on customer orientation expands the rights and duties of both citizens and the public administrators because a higher emancipation of the citizens one the one side and a reduction of regulations on the other side foster a shift towards the guaranteeing and enabling state (Thom, Ritz 2006, p. 84). People have more freedom to choose which service they want to receive, but they also bear a higher degree of self-responsibility. According to the OECD (OECD 2009), this allows for a more intensive inclusion of citizens' considerations in the design and delivery of public services, which is expedient to increase transparency, accountability, civic capacity, trust and democratic governance. Consequently, the NPM seeks to adapt the public sector and its service provision as well as possible to the organization of the private sector. Becoming a customer of public services, citizens can use their voice and express complaints, demands or suggestions that have to be taken into account by service providers if they want to stay in business. Otherwise, the customer can exercise choice by switching providers or selecting different offers. According to NPM supporters, this will allow citizens to choose the best service at an adequate market price, simultaneously increasing citizens' satisfaction.

Reform critics find several risks and problems in connection with these measures. Most apparent is the fact that in order for the reforms to reduce prices, the inefficiencies of bureaucratic public monopoly organizations need to be more expensive than the implementation of a market model that requires new regulations as well as additional infrastructure on several levels and for all participants.

[5] Unless common knowledge the following explanations are based on: (Megginson 2000; Megginson et al. 2004; Florio 2003).

The need for complex new regulation is one of the major points of criticism. Without regulation, SGEI markets fail because the opportunistic behavior of market participants would cause those able to so exercise their superior market power (monopolies, oligopolies, cartels etc.), leading to unbalanced and unfair supply conditions at the expense of the population, in particular of its weaker parts that usually suffer disproportionally more in these cases. The problem is that even if NPM insists on regulated markets, these regulations can fail for multiple reasons, such as mistakes or corruption, and therefore cause situations that might be worse than if there had been no regulation in the first place.

A key problem of privatization, especially regarding SGEI, is that if, for any reason, the private sector fails to deliver the service, the state needs to take over or find a new solution because of its special SGI obligations. This can easily turn the desired savings into additional costs. Other privatization-specific problems are that selling strategies are often unpopular especially if they imply an acquisition by a foreign investor or mutual stock fund that carries the risk of the corporations' disintegration, where investors usually sell the valuable parts to different tenders, leaving less economic parts to their dissolution and possibly destroying jobs and harming public welfare in the long run. Moreover, there is a risk that the state may start to depend too much on privatization revenues, so that financial problems occur if there is nothing left to sell. Also, such dispositions may lead to false figures of a state's GDP or budget, which can cause debit crises due to suddenly rising interest rates. Decentralization carries the risk that after the process has been completed it can turn out to be less effective or transparent than the original setting.

All three concepts share the problem that if they reach their goal of higher efficiency rates, they are also likely to cause unemployment. If the implementation of these concepts successfully increases efficiency rates, in a situation with constant demand this will lead some workers to become obsolete. Indeed, the efficiency gain can allow the remaining workers to receive better pay and even generate a higher total value, but it also implies that people will lose employment and start to depend on state aid. So despite a higher total value, social imbalance can increase if the higher benefits are earned only by a few people while the society has to bear the costs for the newly unemployed who find themselves in a worse situation because they depend on others, have less money and no work, all of which can significantly reduce life satisfaction (Frey, Frey 2010). Still, knowing the possibility of these effects, the state can take action if necessary.

Measure	Pro	Contra

Liberalization	• Creates competition
	  ○ (Almost) market prizes
	  ○ Quality improvement
	  ○ More research
	  ○ New products/services
		• Requires complex regulation
		• Possibility of regulation failures
		• Chance of increasing social unbalance
		• Costs could outweigh benefits

Privatization	• More competition • Extra revenues for the state • Cost reductions • Balancing of Gov. books • Presents for the people	• Increases unemployment • Unpopular • Contra productive • GDP and budget dependence
Decentralization	• More competition • Higher transparency • More personal responsibility	• Can be more expensive • Difficult criteria to judge
Combined	• Higher efficiency • Higher total value • Incentives • Innovative and individual • Choice	• Increases social unbalance • Economic opportunism • • • (Choice?)
Bureaucratic	• Equal treatment • High security of supply • No economic opportunism	• Lower efficiency • Missing incentives • Personal opportunism (see above)

Table 3: Pro and Contra of Reform Measures and Bureaucratic Steering.

So far, the above allows the conclusion that the largest problem (risk?) of NPM measures is the need for precise planning, organization and control, because although NPM measures seem generally able to improve SGI provision, the number of possible hurdles and their negative effects seem significantly higher or stronger, working disproportionally at the expense of the weaker parts of the population than those of the public bureaucratic supply model. Given that NPM reforms need to be very well organized, avoiding problems on the in- and outside, if they are to equally benefit everyone, it seems that reform skeptics have a point here. Achieving this goal is very difficult, and it seems more likely that the gains will be spread unequally. Against this backdrop, the main question of the reform should be based on balancing between benefits, losses and possible/necessary compensation to guarantee a more equal share. Yet unfortunately, there is another, more system-critical point that, if correct, interferes even more deeply with the SGI social and security obligations and with European social conventions.

2.4.3 Controversy: (Un-) Balancing the Public Customer

The most critical point reform critics find lies exactly just where reform supporters see one of the greatest advantages of the NPM, namely in the new role of the citizen as a consumer of public services. According to the reform promoters, becoming a customer allows citizens to make use of their choice and voices in order to gain the advantages of market competition (Le Grand 2007, Giddens 2003; Schoppe 1995). However, there is a lively and complex debate focusing on possible weaknesses, problems and conflicts of the consumer concept (see esp. (Simmons, Powell and Greener 2009) but also (Fountain 2001; Aberbach, Christensen 2005; Clarke 2007)). Indeed, exploring this issue is not without difficulties because the pertinent literature uses the terms citizen, customer/consumer/client etc. all too often in an undefined, thinly defined, differently defined context or even interchangeably (Prosser 2005, p. 3). This is not only confusing, but may also lead to obscurity of these terms. Moreover, the debate covers the full spectrum of SGI, where the problems connected to NES play a larger role than those connected to the here interesting SGEI; although, given that there is also a significant intersection, a sole consideration of SGEI would not make much sense at this point. To explain the argument about the public customer more precisely, it is assumed here that the term 'citizen' merely stands for people who are state residents and that customers of the public services are only the people that call upon public services. Given the fact that clientele of public services can also include individuals from other nationalities, while at the same time not all citizens necessarily call upon a respective public service, it becomes clear that citizens and customers are not the same, even if both groups usually overlap to a large extent (Schedler, Proeller 2009, p. 68).

According to Olsen (2004, p. 70), an exclusive focus on customers, like it exists in the private sector, would in fact deny the special nature of the public sector because if public services would be driven by self-interest an equal treatment for all citizens, like it is favored by the original idea of citizenship, could be no longer guaranteed (applies also to the rights granted to non-citizens and non-consumers). Consequently, the approach does not match the older and well-established concept of *'republican citizenship'* (Aberbach, Christensen 2005; Pollitt 2002, p. 226), so that one big risk of this approach is that it increases inequality in society because it devaluates the opinion of all non-consumers and may in several cases also select among the consumers, meaning it favors the frequent and/or strong consumers more than the less frequent consumers (Reuters 2010, pp. 159-160). Fountain notes in this context that *"the central and most troubling paradox is that customer service techniques and tools applied to government may lead to increased political inequality even as some aspects of services are improved"* (Fountain 2001, p. 56). Other voices criticize the figure of the universal customer, arguing that the issue is much more complex and therefore requires a more differentiated perspective. So they distinguish, like in the private sector, between several types or faces of customers (Edwards 2000; Aldridge 2003; Gabriel, Lang 2006), and state that each of these faces requires individual consideration to analyze the effects of the implementation of customer orientation in the public sector. For example, Gabriel and Lang (2006) distinguish nine different types of consumers, such as the rebel who is using the product in new ways, or the rational chooser whose

choice is based on genuine options, finance and information. Others pay attention to the role of different public service contexts, stating that what might work out in some situations for some people might not work out for others or in other situations (Le Grand 2007). Additionally, social and security aspects are argued as important not only for the respective type of customer, but also for how the differences of these types are recognized and implemented in different public service contexts (Simmons, Powell 2009, p. 255; Simmons, Powell and Greener 2009). Exploring the figure of New Labours' citizen-consumer, Clarke (2007) identifies especially consumerism and choice as important vertexes in the Labour concept. He shows that the one-dimensional version of choice, like it is used by governmental officials, is hardly consistent with both scientific theory and reality. According to him, it is necessary to distinguish between the different sites and forms of choices (choice of provider, choice of service, choice of place and time, etc.) and the different aspects (needs, rights and wants) choice is referred to (Clarke 2004, p. 14). Furthermore Clarke et al. (2010) argue that the implementation of choice in the public sector often leads to problems with equity in the form of political antagonisms between choice and equity. Regarding SGEI, the following two points are particularly interesting:

> *"The first is that the principle of 'choice' moves decisions from the collective/public/political realm to the private/individual, diminishing the public realm in the process. Such de-politicising moves make it harder to sustain collective relationships, practices and institutions of solidarity and equity. The public interest is reduced to an aggregate of individual choices rather than the outcome of collective debate, deliberation and political representation. Equity (whether equality of opportunity, of access or of outcome) may simply disappear in a field of individualised choices.*
>
> *The second involves the relationship between choice and inequality. In market relations, choice is tightly linked to the production and reproduction of material inequality. Choice in market exchange is mediated by the cash nexus in such a way that greater amounts of cash (or its equivalents) enable greater choice. Market based choice is positively disposed to wealth, often involving the expanded reproduction of inequalities (wealth accumulates advantages; poverty multiples disadvantages)"* (Clarke, Lewis and Gray 2010, p. 240).

So in contrast to Giddens (2003, p. 20), who states that offering choices to weaker people is definitely a form of progress because richer people either have always had a choice or do simply not depend on it, so that offering choice to everyone must be understood as a step towards equalities, the two points cited above indicate that choice can imply disproportionally higher risks for weaker consumers.

Summing up, due to the high inefficiency of bureaucratic public monopolies, private organization is often able to generate benefits, despite the additional necessary expenditure. Due to competition generated by the new established market structure and through the disintegration of the former compound, these benefits become available to consumers. However, given that markets sometimes tend to favor wealthier participants, and that the concepts of choice often function better if they are used actively (which is usually also easier the higher the personal capacity is), the new organization structures can theoretically increase inequalities between different socio-economic groups even if they improve the overall situation. Moreover, since the weaker consumers carry a higher risk if regulation fails or other disturbances appear, it is possible that market or regulation failure discriminates against the weaker but favors wealthier consumers, so that the research hypothesis is theoretically definitely possible. On the other hand, simple, well-working choice mechanisms have the potential to let everyone benefit equally so that eventually, prior existing inequalities would be reduced or removed. Consequently, the discussion of the theory gives us enough arguments for and against the hypothesis that the reforms have created or increased social imbalances between weaker and wealthier SGI customers, and therefore legitimizes a further investigation. Hence, I now turn to the related research on evaluation and reform effects.

3. Evaluating Public Management Reforms

3.1 Forms and Criteria

The scientific interest in evaluation and exploration of the consequences of NPM has developed relatively late compared to the interest in other research areas of the NPM (Pollitt 2002, p. 274). Also, most of the empirical work by public management researchers has been based on qualitative methods. Thus, the academic effort has concentrated on case studies of, or commentaries on, government policies or management practices, while by contrast quantitative research in the way of statistical hypothesis testing has been rare (Boyne 2002, p. 324). However, in the last decade the amount of publications related to quantitative reform research has grown constantly (Pollitt 2002, p. 276), and at least in the Anglo-Saxon and continental European countries, there is a clear tendency towards a further increase in the use of quantitative methods regarding this field of research (Van der Meer 2007, p. 168).

According to Wollmann, the term public sector reform refers to the character, reasons and developments of the reforms, while he describes evaluation as an *"analytical procedure or tool meant to obtain all information pertinent to the assessment of performance, both process and result, of a policy program or measure"* (Wollmann 2003, p. 4). In this context, a distinction needs to be drawn between internal evaluation measures (monitoring) and external and internal evaluation research. While monitoring, as a concept within the NPM, aims at measuring the activity and performance as an internal indicator-based and result-orientated procedure and tool for information gathering and reporting, evaluation research analyzes data referring to a causal context. More precise evaluation research typically uses socio-scientific methodology in matters of more complex causal coherence questions that ask for causality between an observed phenomenon and a certain policy intervention or change (Doronzo, Florio 2007, p. 6). However, caution is advised here since in reality the boundaries are often more floating than clear cut: *"It is not always clear whether* [evaluation] *reviews pertain to evaluation as an instrument within the NPM or to an evaluation of the reform as such. […] There appears to be a grey zone in between in which NPM reforms are evaluated within the logic of NPM itself"* (Van der Meer 2007, p. 169). Following Wollmann, typical evaluation questions of public sector reforms can consider:

1.	Whether and how the institutional changes have been achieved or implemented (implementation evaluation)
2.	The operational performance and process improvement (Pollitt, Bouckaert 2004, pp. 122-123) resulting from a reform measure (performance evaluation);
3.	Weather the output and outcomes of administrative activities have been affected by the reform (output-, impact-, result evaluation);
4.	Intended or unintended effects or impacts on the broader political-democratic context (Christensen, Lægreid 2001, p. 32).

Table 4: Questions for Public Sector Reform Evaluation (Wollmann 2003, pp. 4-5).

Similar to this, Boyne points out that evaluation of public sector reforms can be assessed on the basis of a variety of criteria for example: what impacts did they have, have the proposed goals been achieved, additional to the desired outcomes have there been any unintended side effects, how to judge about the degree of their success or failure and did the benefits of the reform outweigh the costs? Boyne (2003a, pp. 4-5). He argues that answering these questions would indeed provide a comprehensive assessment of the reform impact but that this, in itself, would not offer enough information for a sufficient evaluation of public management reforms – it would only answer whether a reform has worked, but not why. Missing an answer to the why-question immensely limits the informative value of an evaluation, because without knowing the causalities that generate the reform effects, scientific learning is hardly possible. Consequently, Boyne (2003a) postulates that in order to promote both, academic knowledge and organizational learning, evaluation must be theory-driven, meaning that it needs to be based on a theoretical construct that is concerned with the relations between a reform and its effects. Moreover, he states that, precise measurement, precise method-

ologies and theoretical depth are required for reform evaluation research. His study (Boyne 2003a), which uses the public choice theory for a theory-driven approach to explain the outcomes of public sector management reforms of UK health care, education and housing, is an excellent example and therefore, also the model for this study. According to the author, the concept of the public choice theory has dominated the public management reform movement in the UK for a long period and hence, in theory, increased the use of (1) competition and (2) performance indicators as well as (3) reduced organizational size. The synthesis and explanation of these three main analytical concepts with the help of the public choice theory offers the basis for his evaluation of the reforms in the respective sectors mentioned above (Johnson, Talbot 2006). Unlike most other models, this one is focusing not only on the criteria of effectiveness and responsiveness inherent to public choice theory, but also on the unintended effects of the reforms, even if only with respect to equity (Van der Meer 2007, p. 169). Boyne (2003a, p. 14-15) explains his choice of criteria by discussing four possible options for choosing them: As a first option, he names the reform goals as formulated by the policy-makers, but states that they carry the disadvantages of possibly being conflicting and revealing only the official objectives of the reforms. Second, he names the possibility that evaluators create their own criteria, although he finds this problematic because choice and weightings may be too subjective. Thirdly, he suggests identification of all relevant stakeholders who are affected by the reform to ask them for their criteria, but argues that this in practice is rather difficult to realize. Finding all three approaches problematic, he finally suggests a fourth one where the criteria are based on the theoretical foundation of the respective reform. For example, privatization theory states that privatization leads to increasing efficiency, hence efficiency becomes an essential criterion to judge the success or failure of privatization. Indeed this procedure covers only the effects inherent in the theory the reform is based on, but since side effects are possible, further criteria are required that can capture these side effects so that they can be considered in the evaluation as well. Thus, *"*[i]*n order to retain the emphasis on a theory-driven evaluation, and to make the task manageable, it is essential to consider only those unintended outcomes which have themselves a strong theoretical basis"* (Boyne 2003a, p. 16).

Meanwhile, several studies use similar theoretical and empirical approaches, although almost exclusively on the regional level because the risk of getting confronted with insuperable methodological difficulties is rather limited (Glück 2007, p. 7; Ritz 2003). While this kind of regional studies usually encounters only few problems concerning internal validity, their external validity is often relatively low due to the small scope of the units of analysis. Other approaches using comparative intra- or supra-regional approaches often fail to go beyond the descriptive level and can only assume the real nature or cause behind a specific relationship. However, the amount of studies which go a step further using or generating theoretical models to access their comparison has increased over the last years, as can be seen for example in these volumes: (Ferlie, McLaughlin and Osborne 2002; Pollitt 2007, Wollmann 2003). Another, more extensive example is a study by Pollitt and Bouckaert (2004) that reviews the developments of public management reform and change in twelve countries. With the help of a pre-designed theoretical base model the authors relate the reforms to particular political systems and contexts and generate theoretical models based on the managerial and political realities of these reforms. The comparative procedure permits the authors to present selected national experiences and interpretations of the reforms in a global perspective (Harrow 2000, p. 882), which in turn allows them to view public management reforms as a part of a broader agenda of public governance. Moreover, Pollitt and Bouckaert explain the main problems that are compound with such a comparative evaluation of public management reforms (Pollitt, Bouckaert 2003, pp. 14-21): First, the units of analysis need comparable properties, but their determination gets more difficult with increasing size and complexity of the units. For example, using nation-states as units of analysis of a public management reform is complicated if the preconditions, the reform measures, the administrative structures and/or the degree of implementation among the states differ too much. Moreover, the meanings of the different measures often vary from country to country and are sometimes not considered in rational evaluation approaches, which goes to the cost of the evaluations explanatory

power. In many cases the scarcity of key data is a major problem because several methodological standards must be met to allow valid measurement and comparative evaluation. Furthermore, a valid judgment of reform effects requires that the data is subjected to a set of precisely specified criteria, which due to the enormous variety of existing criteria is often a rather difficult task. Finally, attention must be given to the relationship of reform talk and reform decisions. Have the decisions really been implemented? If yes, to which degree, and furthermore, have they changed the outcomes? Except the first, these problems are also found with non-comparative approaches. Generally, these problems may be the reason that there has been a certain hesitation among scientists regarding this kind of research, and why the evaluation of NPM reforms so far has been far less systematical than the evaluations produced in relation to NPM-like management (Van der Meer 2007, p. 168).

Against this backdrop, Lynn's (2006) analysis of the developments in the field of public management is interesting because the clear overall picture of the developments that he creates offers a solid basis for further international comparative research in this area. Stating the opinion that the two concepts of public management and public administration have to be used either as interchangeable or as complementary concepts in order to serve as an international comparison of the related developments, he analyzes the differences and similarities in the developments of public management and pubic administration traditions in France, Germany, the UK and the US. His approach acknowledges historical as well as current concepts, ideas and paradigms in a global perspective, while at the same time respecting national differences, traditions, cultures and historical legacies. This way, Lynn creates a path-dependent approach that makes it possible to understand the commonalities within the differences among the countries, not only regarding public sector reforms, but also within the whole field of international public management and public administration research (Toonen 2008, p. 222).

From this perspective, the hypothesis can also be seen as a part of an evaluation of European SGI reforms since it refers to only one of the criteria, namely social equity. Indeed, the conditions and difficulties stay the same because they apply to every criterion that has been identified as a possible target for intended or unintended reform effects by a sufficiently reasoned hypothesis. Given that it has been shown already that the hypothesis meets the criteria for a theory-driven derivation of possible reform effects, the next part will analyze the related literature to give some more information about the options for empirical testing, particularly against the backdrop of the different kinds of data that can be used here.

3.2 Perceptive Research and SGI

Literature on measurement in social sciences usually differentiates between subjective and objective measures or data (Meier, Brudney and Bohte 2005, pp. 17-20). In order to be classified as objective, a measure needs to *"be impartial, independent and detached from the unit of analysis"* (Boyne, G.A. 2003b Boyne and Walker 2006, p. 16). For example, measuring a human's size with a measuring tape is objective measuring because it fulfills these criteria and is easy to check. Owing these features, objective measures *"are believed to reflect the 'real' world accurately and 'minimize discretion'"* (Meier, Brudney and Bohte 2005, p. 19), which in turn is the reason for their generally high popularity, and also why they *"have been viewed as the gold standard in public management research"* (Andrews, Boyne and Walker 2006, p. 16). Turning to subjective measures, an adequate example could be the determination of a human's size by asking her or him or even someone else. This method bears several uncertainties since subjective measures *"may be biased or prejudiced in some way and* [are] *not distant form the unit of analysis"* (Andrews, Boyne and Walker 2006, p. 17). For example, the person might be wrong about the size or prefer, for whatever reason, to give an incorrect answer.

So far the terminology of objective and subjective has been used here only to differentiate between different ways of measurement and not to distinguish between reality and social construction as different paradigms or research approaches. Indeed, the latter is important too, since it refers to the

principle debate about the *"relative utility of objective and subjective approaches"* (Van Dooren, Van de Walle 2008, p. 531; Van de Walle, Roberts 2008), which has recently regained attention, particularly in the area of public sector performance measurement, and is therefore closely intertwined with this topic. The debate is based on an argument in social measurement that started in the early 1970s and which has been significantly influenced by the different positions of Karl Popper and Thomas Kuhn (Fuller 2003). Today, it can be described as a

> *"*[…] *debate between scientific positions. On the one hand, there is the Popperian tradition that assumes an objective truth independent of the knowing subject. It implies that performance is a reality that can be uncovered through measurement. On the other hand, the Kuhnian tradition assumes that truth in science is a socially constructed paradigm. Performance in this view is intersubjective rather than objective, and measurement is an integral part of the definition of performance."* (Van Dooren, Van de Walle 2008, p. 531).

In the above example, one would ask if size really is an independent value that has always been there (Popper), or if it is something that did not exist in that way until the allocation of the respective measure took place (Kuhn). From a Popperian perspective, subjective measurement due to its missing distance to the unit of analysis is not able to fully grasp the objective truth. In contrast, following the Kuhnian perspective it becomes clear that distinguishing between objective and subjective truth is irrational, since "*[a]ll measures are ultimately 'perceptual' rather than 'factual'"* (Andrews, Boyne and Walker 2006, p. 15). Thus, adapting the Kuhnian position that everything is based on social construction, the GDP just as well as what is represented by personal opinion, the question of 'objective or subjective' becomes automatically invalid, and the construct measurement a part of the construct's definition. However, the question of the explanatory power or validity of a certain approach still stays the same, since it always depends on the accuracy of the respective method and the quality of the data; and from this perspective, the GDP is simply a construct easier to apply than the construct subjective satisfaction because the GDP can be measured objectively, thus independently from the unit of analysis, while subjective satisfaction cannot. In this context, the distinction between objective and subjective measures is often also equalized with using facts (objective) or opinions (subjective), but even though this is a practical simplification, it should be clear that this depends on the respective view and therefore cannot be accepted unconditionally. However, it appears that there will not be a universal agreement on which criteria require which operationalization, but only comprehensible and less comprehensible definitions and operationalization. Here, a conceptual view is taken finding both measures to be eligible and important for an operationalization of certain types of criteria. This decision is based on the opinion that it is necessary to discuss the strengths and weaknesses of both concepts for each and every case individually in order to operationalize a concept's criteria in the best possible way. However, this point is still disputed among researchers, as can be seen by giving the following related examples.

Recently, the German Council of Economic Experts and the French Conseil d'Analyse Économique published a report of their joint research on the determination of citizens' well-being (Council 2010) based on the Stiglitz report (Stiglitz, Sen and Fitoussi 2009). In their detailed considerations, they compare subjective and objective measures and come to the result that subjective measures could not be used for an empirical approach because they would not meet the necessary standards (Council 2010, pp. 61-70). Demonstrating how researchers disagree about the best way to receive the relevant information, the report is not only an excellent example for the concerns and criticism of economic objectivists, but also proof that determining citizens' life situations and what influences them to what extent has become increasingly interesting for researchers and policy-makers. Despite its well-founded argumentation, the Councils' paper indicates an increasing trend also among economists towards the additional consideration of subjective measures. Modern economic happiness research is only one of the possible examples here (Steiner, Leinert and Frey 2010, p. 15). However, referring to economists' critical view of subjective data, Bertrand and Mullainathan (2001) ask if there are any gains in adding data from subjective questions to econometric models. In their findings, they argue that on the one hand *"these data may be useful as explanatory variables"* (Bertrand, Mul-

lainathan 2001, p. 71) and that it may be beneficial to explain differences of individuals in practice, but on the other hand they advise caution for the use of eventual results, since they might not be causal. Moreover, they cast serious doubts on using subjective question data as dependent variables *"because the measurement error appears to correlate with a large set of characteristics and behaviors"* (Bertrand, Mullainathan 2001, p. 71). Thus, although the authors see possible benefits and do not deny the implementation of subjective data in econometric models in general, from the economists' perspective their argumentation exemplifies much of the predominant skepticism, not least because of what people say cannot automatically be equalized with what they really think or mean. According to Wall et al. (2004), subjective measures of performance have two types of especially significant errors:

> *"First, if subjective performance measures contain random error, for example as a result of respondents remembering figures incorrectly, guessing, or confusing the accounting period of interest with an earlier or later one, then the effect will be to attenuate any real underlying relationship with associated variables of interest (Type II error, or false negatives). More troublesome is the possibility of systematic bias creating relationships between practices and performance that do not really exist (Type I error, or false positives). Such "common-method variance" bias is a danger where information on the practices and performance is obtained from the same respondent, a common procedure in the literature"* (Wall et al. 2004, pp. 98-99).

Adapting Bertrand and Mullainathan's (2001) measurement error problem, Grassi and Pulglisi (2008) *"propose a*[n] *individual fixed-effects technique to tackle some of the consistency issues deriving from the potential correlation between the explanatory variables and the biases in the reported level of satisfaction"* (Grassi, Puglisi 2008, abstract), and test it on the reported satisfaction on SGEIs' (electricity, gas, telephone postal services and railways) in the Eurobarometer in combination with the objective OECD regulatory reform indicator (ECTR) variables. The findings are proof for a successful combination of subjective and objective data in an empirical analysis. Moreover, the study is a part of a research series under the leadership of the Department of Economics, Business and Statistics of the University of Milan that deals with the effects of utility reforms (NPM market-style reforms) in Europe, involving the implementation of subjective data in form of surveyed attitudes from the Eurobarometer, and therefore rather interesting for us. Thus, in another article of this series Ceriani et al. (2009) discuss the dominant policy paradigm of NPM-style reforms on parts of the network industry (electricity, gas and telecom) as advised by the EC and OECD. Finding no empirical support for the assumption that *"the adoption of the same policy pattern in any and all the EU countries is always welfare improving"* (Ceriani, Doronzo and Florio 2009, abstract), they argue that the issue is far too complex as that it could simply be covered by the implementation of a universal reform paradigm, and instead emphasize the role of country and regional specific factors. Consequently, to allow for a more detailed analysis of the many different factors involved, and to be able to study the overall impact of the reforms more precisely, the Milanese research is not only interested in the content of the reforms and their effects on productivity, efficiency, effectiveness and other economical values, but also in the effects on citizens' subjective attitudes:

> *"There are two reasons to consider data on attitudes. First, because they are important per se. Policy-makers and regulators are well aware that reforms of services of general interests are in the forefront of public debate in the European Union (the widespread concern about the Bolkenstein Directive on the liberalization of services being a clear example), and it is then important to understand to what extent EU citizens are satisfied with the provision of SGI, changes over time and variations across countries. Second, subjective data can be a complement to objective evidence in order to evaluate the welfare impact of reforms"* (Fiorio et al. 2007, p. 2).

In addition, the advantages of complementing subjective data are also reasoned for by the problems and costs that can accompany a classical econometric welfare analysis, since the required data often does not exist or is difficult and costly to get, so that in many cases its acquisition would run out any possible benefits by far (Fiorio et al. 2007, p. 4). Some of the papers in this series analyze the reform effects on consumers' subjective and objective welfare regarding SGI in the EU, in particular on electricity (Fiorio, Florio and Doronzo 2007; Fiorio, Florio 2008; Fiorio, Florio 2011) and gas supply (Brau et al. 2007), telecommunication services (Bacchiocchi, Florio and Gambaro 2008) and water supply

(Fiorio et al. 2007; Grassi, Puglisi 2008). In general, they use the OECD's objective ETCR indicators for regulation together with economic variables for price, GDP, inflation etc., e.g. from the World Bank or the Eurostat, combined with subjective data from the Eurobarometer to look for the reforms effects on prices and quality as well as on subjective satisfaction with access, price, quality etc. The studies use different econometric models from standard panel techniques to specifically designed models that are also discussed by two further articles: Ferrari et al. on measuring users' satisfaction (Ferrari, Pagani and Fiorio 2008), which reveals the role of contextual variations regarding the relative differences across the EU 15 satisfaction score, and the article on "*evaluation and comparison of European countries"*, which deals with the development *"of an indicator for classifying European countries with relation to consumers' satisfaction for services of general interest"* (Ferrari, Annoni and Manzi 2009, abstract). Their results present a mixed picture, which will be assessed in greater detail later.

To conclude, direct objective measurement is less error-prone and therefore usually more reliable. Even if objective items are later used to measure a constructed item such as 'quality of life', the procedure in itself (ceteris paribus implied) is usually highly transparent, allowing more accurate information regarding the validity as well. For this reason, the main problem of objective measurement typically refers to whether the modulation is sufficient to correctly measure the phenomenon that in turn, however, can be a rather complex task because it usually requires the use of auxiliary theories determining the relationship between measurement and theoretical construct which validity must be accepted, at least temporarily or until their falsification (Schnell, Esser and Hill 2005). Indeed, as was already established, gathering objective data can be extremely costly and their analysis rather complex, so that in many cases the ends may not justify the means (Fiorio et al. 2007, p. 4). Moreover, objective data might simply not be available, or its use might not be conductive. Sometimes subjective measures are able to reveal different facts than objective measures, which depending on the respective situation can be an advantage but also a problem. For example, if the results of subjective and objective measures highly correlate, using subjective measures instead of objective measures is legitimate and could in the future help to reduce costs (Wall et al. 2004). However, if they do not correlate, this is can be either proof for conceptual flaws (usually of the subjective measure), or an indication that something essential has been disregarded. Thus, until further agreement on definitions has been reached, there seems to be no other way than to assess criteria and operationalization individually in every case. These difficulties may also be why, until recently, most administrative scientists, despite their usual great interest for citizens' attitudes, have concentrated mostly on changes in the efficiency, using objective indicators and given less attention to comprehensive research on reform impacts in matters of the public opinion (Clifton, Comín and Díaz-Fuentes 2008, p. 4). However, expanding the reform evaluation methods from simple objective efficiency rates measurement to objective and subjective measurement of reform impacts on citizens, customers, security and social aspects provides important additional options for comprehending reform measures and their further scientific development. The official start of the COCOPS project (Coordinating for Cohesion in the Public Sector of the Future) in January 2011 marks an important step. Moreover, there already are two related working papers within its framework. The first one analyzes the reforms' influence on different socio-economic groups in terms of satisfaction with telecommunication and energy services in Spain and the UK, using subjective and objective European survey data (Eurobarometer 65.3 + ONS 2006 and INE 2006) (Clifton et al. 2011), and detects reform correlated differences between different socio-economic groups. The second (Jilke, Van de Walle 2011) uses Eurobarometer data focusing on the influence of the degree of education regarding citizens' service complaints in the EU 6 and shows that there is a positive correlation between education level and the frequency of submitting a complaint, in a way that higher educated people are more likely to submit a service complaint than others.

This part demonstrates two possible options for the empirical testing of the hypothesis. The first would be a classical welfare analysis based on objective economic micro data such as price changes,

individual consumption, income, economic baskets, indices etc., although unfortunately this option is only theoretical for this paper, because apart from the fact that I see no possibility to obtain such data, an economic welfare analysis covering several European Member States would exceed the capacity by far. Given that I want to find evidence on the European level, I select the second option and use a combined approach of subjective and objective data, as it is freely available from the databases of the EU and the OECD.

4. Empirical Approach

The empirical approach focuses on the reforms of fixed telecom services[6], electricity and gas supply and is based on subjective data from the EC's Eurobarometer (EB) as well as on objective data from the OECD and the Eurostat. In order to find evidence for or against the hypothesis, first the theoretical construct needs to be determined so it can then be transferred into empirical measurable units against the background of these datasets. Looking at the question – whether SGEI reforms have caused or increased social imbalances in European public services provision – 'SGEI reforms' are defined as reforms that are characterized by the reform package described in 2.4 above, and 'social imbalances' are defined as the presence of an unbalanced SGI provision favoring citizens that are socio-economically better off. Empirically, these concepts are expressed by the objective ECTR sector and sub-indicators (independent variables) and by the degree of satisfaction found among different social economic groups determined by the related subjective indicators (dependent variables) taken from the Eurobarometer. Moreover, additional demographic variables from the Eurobarometer as well as the GDP, HICP, and price variables from the Eurostat will be used as additional controls. The analysis takes place on two levels: first, I use descriptive statistics to explore the data in terms of possible evidence describing the recent changes in regulation, prices, and average satisfaction levels, then I apply my own binary logistic regression model (oriented on the Milanese research) to prove the importance of the socio-demographic background and the influences of deregulation for consumers' satisfaction more precisely.

4.1 Data Sources

The OECD's annual ETCR indicators (Conway, Nicoletti 2006) measure regulation on a national basis and are available for most of its member states for the period between 1975 and 2007[7]. Besides telecommunication, electricity and transport, the ECTR also consider gas, post, rail, airline, and road services. Regarding the here interesting dimensions (telecommunication, electricity and gas), they measure 'entry regulation' as a weighted average of the countries' respective legal conditions coded from 0 (free entry) to 6 (entry franchised to a single firm or regulated), 'public ownership' as a measure for the countries' degree of privatization coded from 0 (all stages are fully privatized) to 6 (complete public ownership), 'market structure' for gas and communication as per cent share of competing firms and operators in the market coded from 0 (no single firm has a market share above 50% in one of the production stages) to 6 (one firm has a share above 90% in every stage) and 'vertical integration' for electricity and gas as an indicator for the vertical separation in the different industries coded from 0 (vertical separation in all stages) to 6 (all stages are fully integrated). After a further weighting, these 'sub-indicators' are combined with the 'sector indicators' that, combined again, result in the overall ETCR indicator. Each step up from the sub-indicators means the loss of information due to additional weighting by the OECD.

The Eurostat is the EU's Directorate-General responsible for all kinds of statistics and data collections in the Eurozone. Besides offering, collecting and generating reports, its task is also to unify the exist-

[6] Fixed local, national and international calls only, all internet or broadband services are excluded.

[7] Note: *"Users of data must be aware that they may no longer fully reflect the current situation in fast reforming countries"* (Conway, Nicoletti 2006).

ing survey methods. Regarding telecommunication,[8] the Eurostat offers an annual index of certain price levels and also the developments of prices of ten minutes local, national and international calls, for electricity and gas the prices for kilowatt per hour (kWh) and gigajoule (GJ) based on staged average annual consumption[9].

The EC's Eurobarometer monitors the development of public opinion in the Member States since 1973. The surveys are conducted between two and five times a year with approximately 1000[10] people per country, addressing major topics compound with European citizenship such as enlargement, security, health, culture and SGI (European Commission 07/05/2012). Besides the 'Standard Eurobarometer' reports published twice a year, there are the 'Special Eurobarometer' (SP-EB) reports *"carried out for various services of the EC or other EU institutions and integrated in Standard Eurobarometer's polling waves"* (European Commission 10/05/2012), as well as 'Flash Eurobarometers', (FB) which *"are ad hoc telephone interviews conducted at request of any service of the EC"* (European Commission 29/03/2012). Lastly, there is the Candidate Country Eurobarometer (CCE). The Eurobarometer reports as well as the respective micro data are fee accessible via the internet pages of the European Union or, in case of the micro data, via the institutions responsible for the polling. The basic Eurobarometer sample is designed as multistage, random probability sample and comes with a variety of weights[11] attached.

From 1997 to 2011, SGI were addressed a total of nine times (EB 47.0 as SP-EB 110 in 1997 on EU 15; EB 53 as SP-EB 139 in 2000 on EU 15; EB 58 as SP-EB 179 in 2002 on EU 15+; EB 62.1 as SP-EB 219 in 2004 on EU 25+; EB 63.1 as SP-EB 226 in 2005 on EU 25+ (SGI only new members); EB 65.3 as SP-EB 260 in 2007 on EU 25+; CB 2003.3 in 2003 on CC 13; FB 150 in 2003 on EU 15; FB 243 in 07/08 on EU 27) regarding issues such as service access, satisfaction with price, quality and information, fairness of the contracts, handling of complains etc. Unfortunately, the surveys' questionnaires have been changed several times to increase the explanatory value of the descriptive reports, causing a significant loss of the datasets' importance for more in-depth analyses based on inertial statistics[12]. Some examples: while in EB 47.0 satisfaction with service quality was coded with 0 <NA> (not available), 1 'good quality', 2 'neither nor', 3 'bad quality' and 4 'do not know', the following barometers distinguished between 1 'very good', 2 'fairly good', 3 'fairly bad', 4 'very bad' plus missing values. In EB 62.1, the question regarding service prices changed from 'fair' to 'affordable' and 'justified', and in EB 65.3 it was only asked if the price was affordable while quality issues were dropped completely. In fact, due to different target groups and other methodological changes, only three of the initial nine EBs can be used for the analysis, namely EB 53 2000 (European Commission a), EB 58 2002 (European Commission b) and EB 62.1 2004 (European Commission c), which limits the focus on service users so that people who do not have access to a service or who do not use a respective service are not included. That is disturbing given the socio-demographic background of this analysis. Thus, the elaborations based on the EB data[13] are limited to the EU 15 Member States during the period from 2000 to 2004.

4.2 Data Processing

The relevant variables from the three data sources are pooled together into one dataset. Besides the weighting for the EU 15[14] that adjusts each national sample to its respective share in the EU 15 as a whole, I integrate also the 'weight result from target' to expand the scope of the set to country level,

[8] For a fee of 255 CHF, more detailed data on telecommunication is available from the International Telecommunication Union ITU.
[9] The prices are for an average tariff with 3.500 kWh (electricity) and 83,70 GJ (gas) per annum.
[10] Exceptions: Luxembourg (appr. 600), Northern Ireland (appr. 300), West and East Germany (appr. 1.000 each).
[11] For more information, see European Commission (2002).
[12] For a critical analysis, the Eurobarometer's methodology and scope see e.g. Nissen (2012).
[13] 2000: SP-EB 139, EU 15, 16.078 citizens; 2002: SP-EB 176, EU 15 plus Norway, 17.041 citizens; 2004: SP-EB219, EU 25, 24.787 citizens.
[14] The EU15 weighting is applied during the whole analysis unless it says otherwise.

allowing for an individual country perspective as well as mutual country comparisons. Since the original coding of satisfaction in the Eurobarometer with 2 to 4 categories plus missing values can be considered ordinal at most, and because some categories contain only very few cases, they were recoded as dummies where 0 stands for 'not satisfied' and 1 for 'satisfied' excepting thereby a small reduction of the informative value in favor of data handling and model performance. Searching for different patterns of satisfaction among different socio-economic groups while missing sufficient data on income,[15] I selected the variables education, occupation and age as indicators for the social status, and recoded education using the Eurobarometer report standard where *"*[t]*he first is the "lower" level covering people who left full-time education at the age of 15 or earlier, the second is the "intermediate" level which covers individuals who left full-time education between the ages of 16 and 19 and the third is the "top" level, those people who left full-time education after the age of 19*" (EB58 2000, 9). To detect possible non-linear patterns, age is also integrated as categorical variable with 6 groups using intervals of ten years, where the first interval covers people at the age from 15 to 24, and the last interval everyone older than 64. Occupation stays in its original form, distinguishing between the following eight categories in which people are either self-employed, managers, other white collar workers, manual workers, house persons, unemployed, retired, or students. Although originally categorical, the ECTR sub- and sector indicators are integrated as metric variables, which is possible because they are ratio-scaled with a sufficient number of categories. Moreover, GDP, HICP and price were added as metric, annual economic control variables on country level and gender, marital status, country and year as control dummies on the individual level.

4.3 Methodology

Having a dichotomous dependent variable is inappropriate for the standard multiple linear or OLS (ordinary least squares) regression model, because if the observed dependent variable can only take the values 0 and 1, then the variance of the error term for linear modeling depends on the independent variables leading to inefficient OLS estimations and biased standard errors. Moreover, the assumption of normal distributed residuals is violated if the given values of the independent variables can also only take two values. However, with the help of a few mathematical transformations and a change from OLS to the Maximum-Likelihood estimation, it is possible to find a more functional, better fitting model in the logistic regression (Best, Wolf 2010, p. 829). To explain my own model, it seems best to have a short look at the two different basis sample estimation models, or at the changes implied by the switch from linear to logistic regression. Equation (1) shows the standard multiple linear estimation:

$$P\,(y = 1) = \beta_0 + \beta_1 * X_{1i} + \ldots \beta_n * X_{ni} \tag{1}$$

where β_0 is the intercept, X_{ni} is the i^{th} individual's expression on the n^{th} independent variable and β_n is the associated beta coefficient that determines the value for an additive change of P in X_n units if X_n goes one unit up while all other independent variables are held constant. Indeed, since the linear model does not work sufficiently with dichotomous independent variables, it has to be transformed twice to take the form of a logistic regression. First P is transformed into Odds (O) (2):

$$O = \frac{P}{1-P}\,. \tag{2}$$

Odds are the ratio of the probability that an event occurs against the probability that it does not. In contrast to P, Odds can take values up to $+\infty$. Indeed, this is a non-linear transformation, which is important because it has direct consequences for the interpretation of the beta coefficients, as I will show after applying the second transformation where the odds become logarithmic, allowing also values towards $-\infty$ (3):

[15] The Eurobarometer's income variable suffers from a high number of uneven distributed missing values and is not available for EB 62.1.

$$Logit = \ln O = ln\frac{P}{1-P} \tag{3}$$

so that the basic logistic estimation is (4):

$$P(y = 1|x) = \frac{e^{\beta_0+\beta_1*X_{1i}+\dots\beta_n*X_{ni}}}{1+e^{\beta_0+\beta_1*X_{1i}+\dots\beta_n*X_{ni}}} = \frac{e^{Logit}}{1+e^{Logit}}. \tag{4}$$

It is important to realize that due to these transformations, the beta coefficients take the form of logarithmic odds, where an interpretation beyond the sign makes no sense by reason of non-linearity, meaning the coefficients allow us only to see if an independent variable has an effect on the dependent variable and if this effect is positive or negative. Due to the reduced explanatory power of the beta coefficient, it is common to use e^{β} as the antilogarithm of the beta coefficient because this 'effect coefficient' (or 'odds ratio') theoretically permits conclusions also regarding the expected sizes of the effects. Still, it has to be interpreted rather carefully, because due to the re-transformation the model changes from linear-additive to multiplicative (5):

$$O = e^{Logit} = e^{\ln\frac{P}{1-P}} = e^{\beta_0+\beta_1*X_{1i}+\dots\beta_n*X_{ni}} = e^{\beta_0*\beta_1*X_{1i}*\dots\beta_n*X_{ni}}. \tag{5}$$

Consequently, if in a logistic regression the result for beta (β) is e.g. 1.5, this indicates a positive effect, but says nothing about the real size of this effect. Knowing that for a beta of 1.5 the odds ratio (e^{β}) is 4.5, gives us the factor of which the total odds ratio increases if the independent variable goes one unit up, but that is by no means to be interpreted as additive to P. Thus, if it is assumed that the odds for a citizen to have a dog are 0.25 and the variable 'gender' produces an odds ratio of 4.5 for being female, then women do not have a 4.5 higher chance to own a dog. Odds ratio are not additive but multiplicative, so that based on the basis odds ratio of 0.25 the odds ratio for women are $0.25 * 4.5 = 1.125$, which is a probability of 53% and an increase of P of 33 percentage points. Consequently, the interpretation of e^{β} as direct increase of chances is correct only if the basis probability is 0.5, since that corresponds with an odds ratio of 1. In fact, the odds ratio alone does not add much explanatory value, which is why I prefer to use the so-called 'average marginal effects' (AME) as the mean of the marginal effects of all observations that can be calculated similar to the calculations above using the models intercept together with the respective odds ratio of the independent variable. One advantage of the AME is that it offers an intuitive interpretation, namely as additive average effect to the probability (if X_i raises by 1, $P(y = 1)$ raises AME points on average), even if it ignores the non-linear nature of the probability curve (Best, Wolf 2010, pp. 836-840). The AME is superior to a simple interpretation of the beta coefficient's sign or the odds ratio also because it is the only measure not affected by uncorrelated, unobserved heterogeneity, meaning it permits the comparison of different models. Consequently, the results of this study are presented in the form of AMEs together with the related standard errors of the beta coefficients, the reached level of significance[16] and Necklace R as goodness of fit measure. The first column shows the results with all variables included, while the second shows the results with the insignificant annual variables excluded and the third shows the results for using the ECTR sector indicator instead of the sub-indicators. Turning to my own model, I can describe its basis logit by the following matrix notation (6):

$$Logit = \Delta_i'\alpha, \Gamma_i'\beta, \mathrm{E}_i'\gamma, \mathrm{K}_i'\varsigma \tag{6}$$

where i stands for the individual, Δ_i is the vector accounting for demographic characteristics (education, age, occupation, gender, marital status and country), Γ_i is the vector for the regulation variables (ETCR), E_i is the vector for economic control variables (GDP, HICP and Price) and K_i is the vector ac-

[16] Marks for the level of significance are *** for p<0.01 and ** for p<0.05 and *for p<0.10.

counting for the respective year leaving $\alpha, \beta, \gamma \; and \; \varsigma$ the parameters to be estimated. The final AME model is this (7):

$$AME_j = \frac{\sum_{i=1}^{N} = g(\Delta_i' \alpha, \Gamma_i' \beta, \mathrm{E}_i' \gamma, \mathrm{K}_\mathrm{i}' \varsigma)}{N} \beta_j \tag{7}$$

where g simply represents the logistic distribution and j the index of the beta coefficient or AME. The model contains an intercept, and all categorical variables are integrated as dummies except for those that were selected as reference to avoid the dummy variable trap. For the sake of completeness, the last formula represents the reduced AME model I used to check for socio-demographic differences on the country level (8):

$$AME_c = \frac{\sum_{i=1}^{N} = g(\Delta_i' \beta)}{N} \beta_c. \tag{8}$$

It considers only the demographic characteristics Δ and is applied individually for the perception of service satisfaction in each sample for each country using targets weights.

4.4 Efficiency and Limitations

Since the efficiency of an empirical analysis is only as high as the quality of the data it is based on, the sample is the first limiting factor here. The original Eurobarometer data had a multi-stage random probability design including EU citizens only. With an average of 1.000 citizens per country, this design is considered as sufficiently robust against random errors, but still possibly susceptible to the biased response problems pointed out by Bertrand and Mullainathan (2001) (see 3.2). The poling and re-coding of some of the variables leads to a reduction of their informative value, as did the OECD's weighting of the ECTR variables, the measurement of which is furthermore relatively gross. However, given that the reform status played no role during the surveys, it can be assumed that the consumers' answer is not biased by their perception of the reforms, so that the measurement of the reform influence is carried out rather indirectly due to the reform status of the consumers' location. In this context, it should also be clear that all measures are limited to influences on the consumers' satisfaction with certain service aspects and therefore can only provide rather conditional evidence in respect to the general hypothesis. Regarding the independent variables, it is important to point out that education, age and occupation offer only limited options for the classification of different socio-economic groups, and that the time period from 2000 to 2004 is rather short to describe the developments as a real trend. Moreover, referring to the descriptive parts, it should be clear that these findings offer no information on causality. As for the model, it is necessary to mention that it would have been beneficial if the model had accounted for the multidimensional structure of the sample by using fixed effects for year and country clusters (9):

$$Logit = \Delta_{ict}' \alpha, \Gamma_{ct}' \beta, \mathrm{E}_{ct}' \gamma, \mathrm{K}_t, \Theta_c. \tag{9}$$

Equation (8) shows the model with $\mathrm{K} \; and \; \Theta$ as fixed effects for country c and year t, but unfortunately it was not possible for here to transfer this equation into a working SPSS syntax, which is also the reason why the approach by Grassi et al. (2008) to reduce biased response problems could not be applied. Consequently, the problems of multicollinearity are higher for the independent variables that differ only on the country level so that the significance of country, regulatory or economic variables is reduced. Moreover, the effects of these variables may be underrated due to the equal treatment with the variables on the individual level. Nevertheless, they are useful as controls for the individual variables and furthermore, even if the effects size is eventually distorted, their sign is still of an informative value. The relatively low Necklace R-squares from 0.08 to 0.16 show that the model explains only variances of 8% to 16% of price satisfaction; consequently, the importance of the independent variables is not very high and the model is not very well adjusted to the data as it is also indicated by the low significance level of the Hosmer-Lemeshow-Test, though the test's informative

value on the other hand may be limited due to possible distortion from missing values. A poor adaptation to the data and too much missing values are also the main reasons why the model cannot be used to explain satisfaction with quality and information or with fairness of the contract; at least the independent variables are not significant. Looking at satisfaction with quality, there is an additional problem caused by the extremely high amount of satisfied people with rates between 93% and 97%, leaving too few cases of not satisfied people for a working differentiation through variables with at most marginal influences. In contrast, for these three cases, adding the independent variables even leads to a reduction of the model's efficiency, meaning that the statistical mean still gives us the best estimation. So given that the model produces usable values only for price satisfaction, its general efficiency has to be considered as relatively low also because it does not allow directly measuring the reform influences on different socio-demographic groups. This becomes even clearer if looking back to the general problems of comparative evaluations of public management reforms described in 3.1, and see that they more or less all apply to this kind of approach. 15 Member States in one component is a large and complex unit of analysis; the subjective data varies not only due to changes of survey methodology but also because of the different languages; the time period is rather short and the dependent variable is neither particularly close to the main concept, nor does it seem strongly influenced by the here relevant independent variables. Following from that is that the internal validity of the model and the concept is rather low while the external validity, due to sample size and according to related findings (see below), is at least sufficient. Moreover, it should be clear that the model together with the dataset is an ex-post-facto-design that is likely to cause variance problems such as too few dissatisfied gas consumers. While its measurement is reliable, this does not change the fact that the validity is very low, which is not unusual in this field, but should be kept in mind in regards to the subsequent analysis.

Given these limitations and inaccuracies that follow from the generalized form of the model, and especially from the fact that it neglects the multidimensional nature of the dataset, I also tried to look at the countries individually by applying a reduced effect model for each year and country. Unfortunately, the results were not promising since from 540 results for the differences between low and moderated educated consumers, only 67 were significant, and even these were broadly scattered over year, country and dependent variables, so that this approach was not further pursued. However, if it would have produced a sufficient amount of significant results, it would have been possible to compare the countries more directly regarding the socio-economic differences in satisfaction, although an expansion of these comparisons in respect to the reforms would have meant only a minor surplus for the overall informative value. Because even if the socio-economic differences can be compared in respect to service satisfaction and ETCR scores between the countries, there is absolutely no information or poof about their relationship. In contrast to this, the chosen model may discriminate year and country effects, and offer only broad averages that may suffer from several inaccuracies, but it can give an indication about whether and how the reforms influence consumer satisfaction.

5. Analysis

This section analyzes the empirical data and model results for consumer satisfaction in respect to the empirical hypothesis. The descriptive elaborations focus on the evaluation of average data from the EU 15, although an exception is made for telecommunication, which is less limited by country and sector specific factors than the other two services and therefore at least conditionally suitable for using the ECTR score to reflect how the reform process evolved individually in the countries. Moreover, even if a direct comparison with the effects found in some of the related studies is not possible due to different data and methodology, checking the results in terms of their overall compatibility can provide at least some additional information in respect to the robustness of the following results.

5.1 Telecommunication

Starting with a closer look at the OECD's ETCR scores: until the beginning of the 1990s, telecommunication services in the EU 15 had been provided almost exclusively by the member states, with the exception of Spain, where the supplier had always been a private monopolist, and the UK, which had loosened its entry regulations already in 1982 (6.0 to 3.2) and privatized about 50% of British Telecom in 1984.

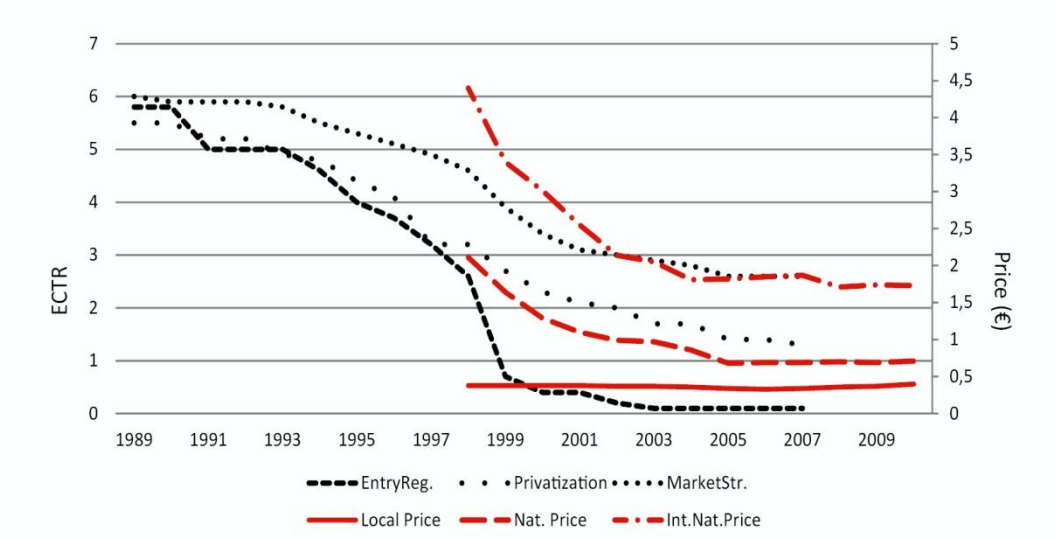

Figure 1: Average Development of Regulation and Prices for Telecommunication in the EU 15 (Source: OECD ETCR, Eurostat)

Looking at the figure, a moderate average decline of about 0.4 points per year for entry regulations in the period between 1990 and 1998, followed by a significant fall from 2.6 to 0.7 in the subsequent year and a further decline to 0.1 in 2003 that basically marks the end of entry regulations for telecommunication in the EU 15 can be recognize. Given the EC's first demand for a reduction of market regulations in 1988, its respective directive from 1990 and its final decision from 1994 that all monopolies in telecommunication had to be removed until 1998[17], these developments are not astonishing (Höfler 2004, p. 3). From an individual country perspective, the UK was the first country to reduce entry regulation, while Sweden – changing from 'no entry' in 1991 to entirely 'free entry' in 1992 – was the first country to completely remove it. The UK, still scoring 0.3 in 1992, followed only one year later. In 1995, Finland and Denmark removed their legal entry barriers as well, so that the three Scandinavian countries together with the UK can be labeled as forerunners to the main field that was led by the Netherlands terminating entry barriers in 1997, followed by France in 1998 and the remaining countries in 1999, leaving Portugal in 2000 and Luxembourg in 2003 lagging behind, and Greece the only real exception because, after the latest reduction from 4.4 to 1.3 in the year

17 Due to the small size of their markets, extensions were granted for some countries such as Portugal, Luxembourg, Ireland and Greece.

2003, in 2007 Greece was the only country among the EU 15 where entry barriers were still partly present. With the opening of the markets, public ownership began to decrease as well, although this time the individual country data shows a slightly higher divergence from the average curve for several countries. Differences regarding service implementation and organization, protective or voter orientated regulation as well as the absence of binding EC regulations are possible explanations. So with Denmark, Spain and the UK (1997), Italy (2003) and the Netherlands (2007), only five out of the 15 countries privatized their telecommunication sector completely, since for Portugal (where fully privatization had already been reached in 2000) the indicator increased again in the following years up to a score of 0.4 in 2007. Such rebounds appeared also in Austria, Belgium and France, although only to a very small degree. In Belgium, where public ownership had fallen below 50% in 1997, a slight increase of 0.4 to 3.2 is recognized for 1998, but no further changes for the remaining period, making Belgium the country with the second highest degree of public ownership after Luxembourg, where is no privatization at all. In France, there is a marginal increase of 0.1 to 3.5 during the year 2002, followed by a significant decline to 1.7, which is 0.4 above the EU 15 average score of 1.3. 1.7 is also the value for Sweden, Greece and Austria in the year 2007, whereas Austria scored 1.6 in 2006. Germany finds itself with 1.9 slightly above the EU 15 average, while Finland ranks below with a total of 0.8. An intended consequence of the market opening was the changing of the market structure due to the entry of new competitors. This is indicated by the decreasing of the EU 15 market structure indicator, which after a comparatively slow but constant decrease from 6 to 3.4 during the 1990s evens around 2.5 in 2007. The development of the average score indicates a clear but not unusual increase of new market entries without significant deviation on the country level in 2007, although looking at the period between 1998 and 2005 it shows that in some countries the number of new market entries increased relatively fast at first, but decreased in the following years again indicating consolidation of the market as a usual part of the process. However, since Portugal, Luxembourg, Ireland and Greece fall under the extension rule, we look on the remaining countries and find that in France, Italy, Sweden and the Netherlands the number of market entries developed slightly slower than in Denmark or Germany, which could be an indication for active anti-competitive behavior like disproportionally high net fees charged by the Dutch former monopolist from his new competitors. In total, consideration of the individual developments has shown that the reforms proceeded differently rather than in a uniform way in the 15 Member States.

Turning to the development of the average prices (Figure 1), the curves indicate significant changes only for national and international calls, while the prices for local calls prove to be rather constant.

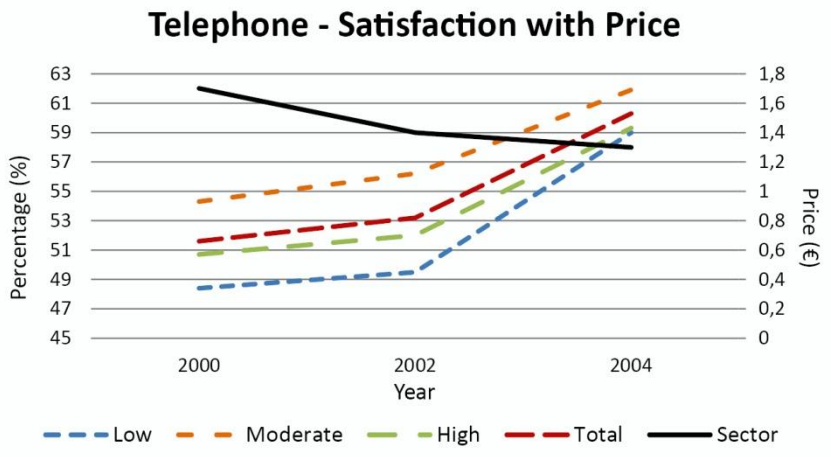

Figure 2: Telecommunication: Satisfaction with Price EU 15 Average (Source: OECD ETCR, Eurostat).

Against this background, it is particularly interesting that the statistics of the means show that the satisfaction with telephone prices in the EU 15 has increased among all service users from about 51%

in the year 2000 to almost 62% in 2004, reducing the gap between poorly and moderately educated people from 5.9% in the year 2000 to 2.9% in the year 2004. Taking an additional look[18] at the satisfaction with service quality and provided information as well as on fairness of the contract, it can be noticed that poorly educated people are generally between the most satisfied moderately educated and the least satisfied highly educated people. Moreover, from 2000 to 2004, satisfaction increases in all four categories among all groups, while at the same time the difference between poorly and moderately educated people is decreasing.

The results of the regression model confirm this trend in so far that they show the probability of all consumers to be satisfied increases about 3 percentage points for the year 2002 and about another 7 percentage points for the year 2004. However, the model cannot detect a convergence for the different socio-demographic groups over time, but it can show that consumers with moderate or high education have, in comparison with people of low education, on average a by 2.7 and 2.4 percentage points higher chance of being satisfied. Moreover, unemployed people are, on average, 4 percentage points less satisfied than self-employed people, which together with students are the most satisfied consumers, satisfaction among people with other occupation being 1 to 2 percentage points lower on average. Looking at the grouped age variable, seniors over 64 are significantly the most satisfied group, while being male increases satisfaction only marginally. In contrast to the GDP, which seems to have no effect whatsoever, inflation shows a small negative effect, although both measures are only significant for the sector model (column 3). Regarding regulation in general, the sector indicator shows that higher regulation is positively correlated (Sector ECTR +5.7 percentage points) with satisfaction, which is also confirmed on the more detailed level by the significant positive effects for the market structure (+1.9 percentage points) and entry regulation (+ 3.1 percentage points) indicator. Furthermore a higher degree of public ownership may be positively correlated, but the indicator is not significant. However, the reform effects in total are relatively small compared to the strong country-specific effects where (except for Greece) all countries show significantly higher positive effects in comparison to the, relatively seen, more regulated reference country Belgium. The strong positive effect of the price indicator may be explained by the only marginal increase of the price during the analyzed period, leading to a flawed estimation. In the calculations by (Bacchiocchi, Florio and Gambaro 2008), the effect is positive as well, but turns negative due to the adding of the prices' growth rate, which was unfortunately not available. Finally, if the results for regulation are compared with the results from the related studies (Fiorio et al. 2007, p. 18-24; Bacchiocchi, Florio and Gambaro 2008, p. 25; Fiorio, Florio 2011, p. 55), there are accordant significant marginal positive effects for the entry regulation and market structure indicators, but no clear result for public ownership.

So, the model[19] on telecommunication does not confirm the impression of a strong positive effect of the reforms on consumers' price satisfaction, which may have been suggested by Figure 2. Rather, it shows the opposite, since less regulation has only a smaller and furthermore negative effect on satisfaction. Since it was not possible to measure the interaction between ECTR and socio-demographic variables, the model's results do not allow for a direct interpretation in this matter. Consequently, even if finding that economically weaker consumers are less likely to be satisfied, and that more regulation has a positive effect, seems to support the hypothesis, it really does not because it provides no information about whether the differences between weaker and stronger consumers have increased or reduced, or whether less regulation affects socio-economic weaker people more than the stronger ones. Nevertheless, the strong effect of the year 2004 indicator at least shows that average satisfaction has increased among all three groups of education, given the size of the average differences between them. So from this perspective it can be argued that the position or satisfaction of different consumer groups might not have developed equally vis-à-vis telecommunication prices, but that it has improved for all of them, and this seems more likely to contradict the assumption that the position of weaker consumers has been worsened by the reforms. Moreover, the trend analysis

[18] For figures see Appendix: pp. 52-53.
[19] Regression results see: 5.4 pp.41-42.

shows that price satisfaction increased the most among the poorly educated, so that in respect to education the imbalances have clearly reduced. Therefore, even if it cannot be ruled out, it seems at least highly unlikely that the negative reform effects on price satisfaction are disproportionally high among weaker consumers. Furthermore, given that the remaining trends of satisfaction with quality, information and contract fairness show either similar developments or provide at least no direct evidence for a growing discrimination of poorly educated consumers, the elaboration of the Eurobarometer data for satisfaction with aspects of telecommunication services offers no evidence for the assumption that the recent reforms have increased the satisfaction of consumers that are socio-economically better off at the expense of those who are not.

5.2 Electricity

Compared to telecommunication, the supply of electricity is technically more complex and also more expensive, requires extensive financial means, a highly complex public infrastructure, and elaborate planning which involves all kinds of public and economic interests on national and international levels. Moreover, electricity supply and prices are a major location factor for the processing industry, guaranteeing local employment and, therefore, popular targets for subsidies. Against this background and because of the many additional country-specific regulations that cannot be listed here, the conditions for generalized market reforms are less ideal than for telecommunication which, is why a slower process with weaker and more diluted effects is to be expected.

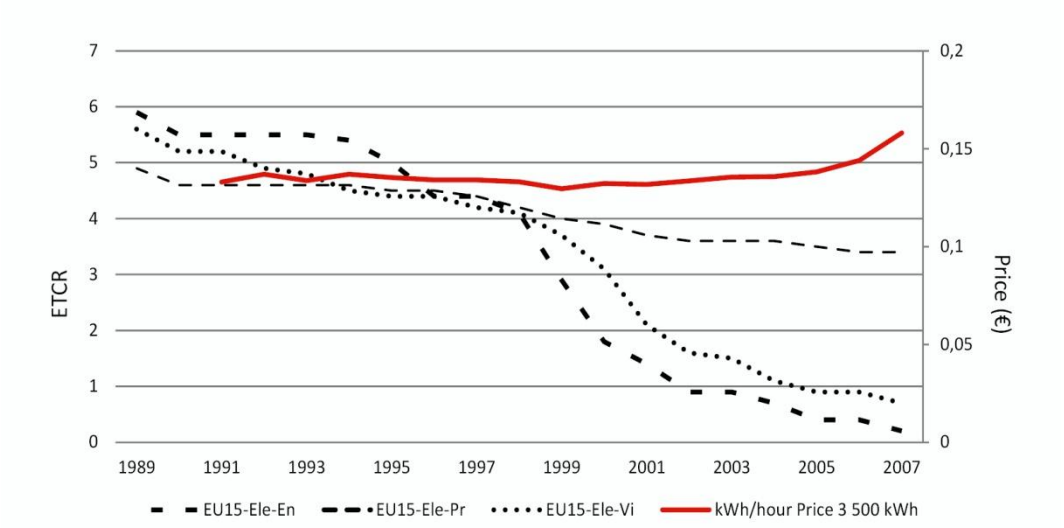

Figure 3: Average Development of Regulation and Prices for Electricity in the EU 15 (Source: OECD ETCR, Eurostat)

The EU 15 average indicators for entry regulation, public ownership, and vertical disintegration show only small changes before 1998. Public ownership stayed relatively high with 3.4 on European average in 2007, but that was to be expected since the immense finical requirements are often manageable only for companies directly supported by the taxpayers, so that in several countries the leading supplier is still completely state-owed. Nevertheless, the opening of the markets together with the unbundling of the infrastructure commenced in most of the Member States between 1999 and 2000, also shortly after the 1998 EU directive. Only Finland and the UK started earlier. So until 2007, almost all countries dropped their entry barriers nearly completely and unbundled their supply sectors significantly, yet in most cases still operated the leading supplier. Looking at the development of the price for an average annual consumption of 3,500 kWh, there are no irregularities indicating a direct correlation between price and reforms. Moreover, the increasing average price between 2006 and 2007 can be explained by the increasing world market prices for the required resources such as coal, uranium, gas etc., and is not necessarily a consequence of the reforms.

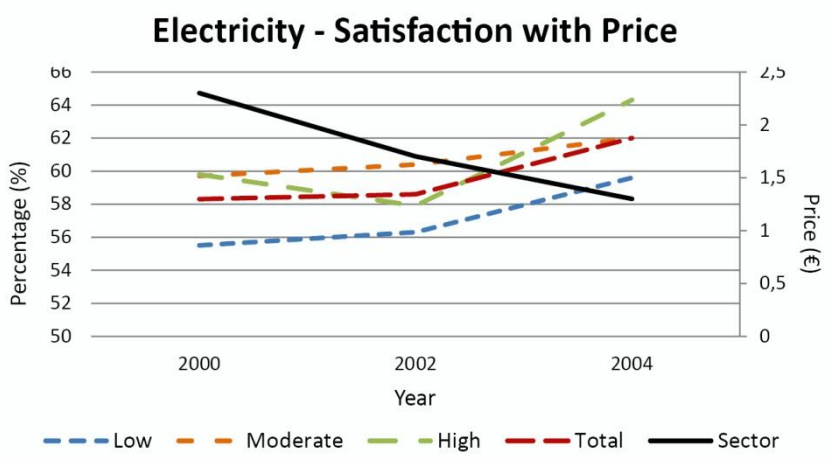

Figure 4: Electricity: Satisfaction with Price EU 15 Average (Source: OECD ETCR, Eurostat).

The developments of price satisfaction indicate an increasing satisfaction among all groups of education, as well as a slight approximation between poorly and moderately educated people. Thus, while average satisfaction in the year 2000 was about 55.5% among the poorly educated people, and about 59.9% among the moderately educated people, it was 59.6% for poorly and 62% for moderately educated in 2004. The generally high satisfaction with quality dropped 1.5 percentage points in 2002, but recovered in 2004 to its former total value of 95.5%. Regarding satisfaction with provided information[20], there is a significant increase for the poorly educated people from the least satisfied (76% in 2000 and 2002) to the most satisfied (85.2% in 2004), while the evaluation of fairness of contract decreases marginally from 76.1% to 75.8% among the poorly educated and from 79.7% to 78.2% among the moderately educated people.

The results of the regression with price satisfaction show a marginally negative development for the year 2002, which matches the prior elaborations. But they also show a negative effect for the year 2004, which was not expected and rather has to be doubted because it neither corresponds with general means, nor can a negative sign be found in any of the related elaborations (Fiorio, Florio and Doronzo 2007; Fiorio, Florio 2008; Fiorio, Florio 2011). From this perspective, false negative signs may be due to the smaller number of valid cases for 2004 compared to other years. However, since it is only an average effect that is furthermore below 1 percentage point, this may be neglected. For columns 1 and 2 where the ECTR sub-indicators were used, it appears that the socio-demographic background is almost irrelevant. Entry regulation is marginally negatively correlated (-0.003), so satisfaction increases with less entry regulation, but decreases with less public ownership (+0.014). The effect for vertical disintegration is extremely small (-0.0003) and negative, indicating that a more disintegrated structure would be beneficial, but the indicator is far from being significant. Regarding the economic variables, increasing price and inflation are being negatively correlated with satisfaction, while the GDP has no significant influence. Turning to the role of the country variables, it can be noticed that they again have the highest influence on consumers' satisfaction, but that was expected as well given e.g. the complex background beyond the service supply and the naturally high evolvement of the public. However, the results of column 3 show a small but significant gap between satisfaction of socio-economic weaker and wealthier people. Moreover, it is interesting to recognize that the general reform package as represented by the ECTR sector indicator has a significant positive influence on consumers' satisfaction, since the indicator shows a negative effect of about 1.3, although at the same time public ownership has been found to increase satisfaction as well. This confirms that the different reform measures can have opposite effects on consumers' satisfaction, which supports the argument from Florio et al. (Fiorio, Florio 2008) that an overall systematic pattern be-

[20] For figures see Appendix: pp. 53-54.

tween the reform-package as a whole and consumers' satisfaction does not exist for electricity. Lastly, these findings also match the results from (Fiorio, Florio 2011, pp. 184-186).

Summing up, the gap found between poorer and wealthier consumers is slowly reducing, while overall satisfaction is increasing. The reform effects are again relatively small, and besides public ownership positively correlated with price satisfaction. Consequently, the creation or further amplification of social unbalance caused by the reforms cannot be confirmed, at least not on the basis of an analysis of consumer satisfaction. Quite to the contrary, the empirical findings are more likely to support the reforms' advocators because the positive effects of the reforms outweigh the negative ones.

5.3 Gas

Turning to gas as the last service considered, it appears more complicated, both from the perspective of a market based reform and from the methodology side. In contrast to telecommunication and electricity, gas is a natural resource the production of which depends both on its availability and on the infrastructure, which is similarly expensive and complex as the one for electricity. Given that gas fields are not sufficiently available in every country, and that the production requires high financial, technical and logistical efforts, the number of potential competitors is even more limited as for electricity, the production of which is also resource dependent, but offers several choices, and telecommunication, the main resource of which is capital. Thus, from this perspective gas supply comes closest to a natural oligopoly, so that a particular focus has to be set on unbundling and vertical disintegration, because in this case dropping entry regulations alone does not create adequate markets with a sufficient number of players to bail out the advantages of competition. Another factor that makes analyzing the development of gas suppliers more complicated is that gas is of different importance for and within the 15 EU Member States. As a consequence, the frequency of missing values is generally relatively high and rather divergent among the EU 15, which is why the information offered by the ECTR EU 15 average is rather limited.

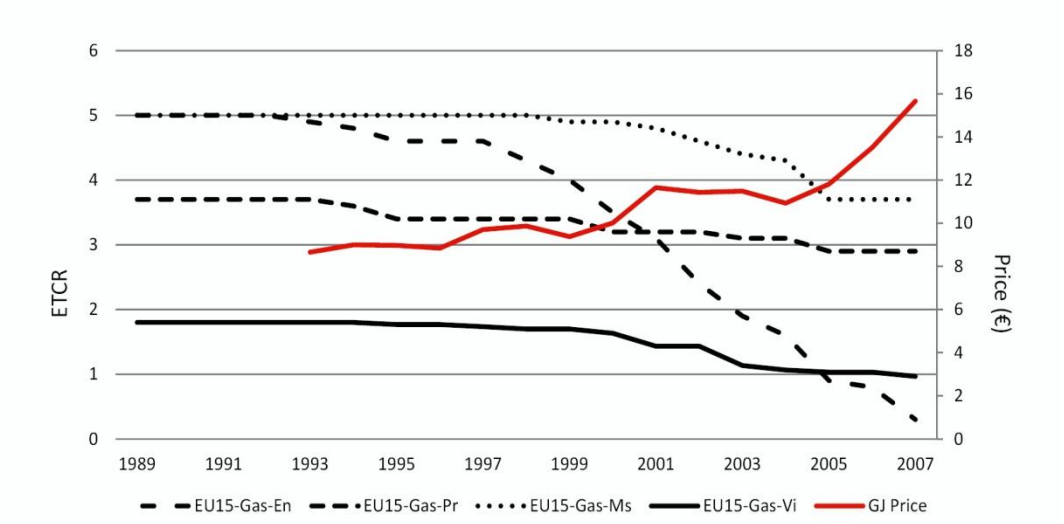

Figure 5: Average Development of Regulation and Prices for Gas in the EU 15 (Source: OECD ETCR, Eurostat).

Given the high variance of the country scores, the figure allows us only to confirm that during the last two decades, the general trend was towards a more market based supply, and that the countries started to remove their entry barriers more actively from 1998 on, which is not astonishing since this was the year of the first EU directive ruling that all entry barriers had to be removed until 2007. Given the development of average prices, the increasing price satisfaction shown in Figure 6 certainly seems odd.

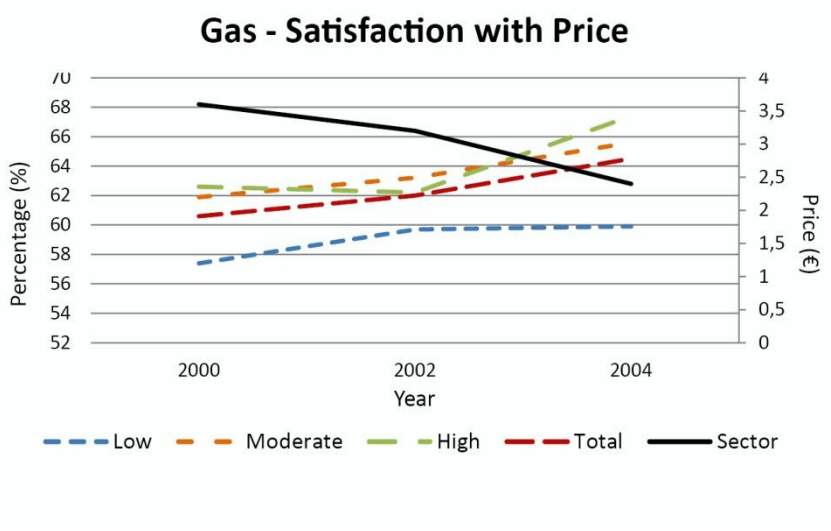

Figure 6: Gas: Satisfaction with Price EU 15 Average (Source: OECD ETCR, Eurostat).

However, the figure also indicates that satisfaction increases significantly more among the moderately and highly educated people, so that for the first time the initial gap between the different social groups gets larger. A similar but minor increase can be found for satisfaction with quality, although its importance has to be seen in relation to an overall average of more than 95% of satisfied consumers. The highest increase can be found regarding satisfaction with information[21], where the curve for moderately educated people jumps from about 81% to 96%, and the curve for poorly educated people from about 76% to 87%, causing the gap to grow as well. On the contrary, satisfaction with contract fairness increases marginally, but only among the moderately educated, while it decreases by about 2 percentage points for highly and poorly educated people.

The results confirm a higher average satisfaction for the years 2002 and 2004. Moderately and highly educated people have a slightly bigger chance to be satisfied, while unemployment reduces satisfaction in comparison to the other categories by at least 2 percentage points on average, although not all of the groups are significant. The same is true for age, where the youngest group relegates the oldest group on the second place, leaving people between 35 and 54 as the least satisfied. Again, being male has a slightly positive effect, and again the individual country effects are the strongest, even if some of them are missing or not significant. Inflation and price have significant negative effects, while the GDP's influences should be assumed as zero. Turning to the ECTR, only two of the sub-indicators are significant: namely, market structure (+0.009) and entry regulation (-0.005). Yet if compared these results match only Brau et al. (2007, p. 38) who find effects with the same sign, while the other related calculations (Fiorio et al. 2007, p. 19; Fiorio, Florio 2011, pp. 184-186) show exactly the opposite.

Given the difficult preconditions, the weak and, in respect to some of the related studies, partly contradictive findings for gas are not astonishing. However, regarding the reform effects, they are simply too vague to consider for an interpretation. Against this background, it can be noticed then that the economically weaker consumers are again less satisfied with prices, although this time, the trends indicate that this difference is growing. So even if satisfaction with price still increases for all groups of education over time, the growth rate of satisfaction increases disproportionally with increasing education.

5.4 Discussion of Results

This analysis was mainly interested in how the affiliation to a certain socio-economic group and the status of NPM market-style reforms affect consumers' satisfaction, and how consumers' satisfaction

21 For figures see Appendix: pp. 54-55.

developed among different socio-economic groups during the reform process in the EU 15. Its particular focus was on finding empirical evidence for the hypothesis that the NPM market-style reforms of the telecommunication-, electricity- and gas sectors increased satisfaction among consumers that are socio-economically stable or better off, but decreased satisfaction of socio-economically weaker consumers. Since the available data could not be used to measure the reform influences on different socio-economic groups directly, the most important task of the empirical model was to determine the chances of socio-economically weaker consumers to be satisfied with prices in relation to the other consumers and to test, whether the reforms have a positive or negative effect on general consumer satisfaction, and how this effect would look like relative to other country specific factors. Given that the discussion of the theory demonstrated that the reforms consist basically out of four concepts, but which were not applied universally among the different countries, the model contained not only the ECTR sector indicator for the countries' overall reform status, but also the ECTR subindicators that fitted better with the individual concepts. Following from the design of the ECTR indicators is that a negative sign indicates a positive effect of the respective reform measure, while a positive sign indicates a negative reform effect. Consequently, the indicators show whether more or less public ownership, entry regulations, competitors (market structure) or vertical disintegration is/are likely to increase general consumers' satisfaction. Thus, they are obviously close to the three original reform concepts privatization, liberalization and decentralization, which were all found theoretically capable of causing inequality (see 2.4). However, the indicators reflected still only the overall average of general consumers' satisfaction, so that the results of the model can only be interpreted as indirect evidence in respect to the hypothesis. If the results had shown that socio-economically weaker consumers are more than, or just as, satisfied as other consumers, or that the reforms have a strong positive influence on general consumers' satisfaction, this could have been considered as strong evidence against the hypothesis. The models' results showed rather the opposite; however, this can merely be interpreted as a further empirical legitimation for the testing of the hypothesis rather than as directly supportive evidence, because proving the existence of socio-economic imbalances provides no information about their cause(s), and finding negative reform effects for general satisfaction says nothing about whether the effects are stronger among socio-economically weaker consumers.

Given that I consider the findings for gas are too vague to consider for an interpretation, the following elaborations summarize the meaning of the findings of electricity and gas towards the hypothesis. Both sectors show significant gaps between the satisfaction of socio-economic weaker consumers and the others. Moreover, the results indicate that less entry regulation and more competitors as well as the reforms in general are likely to reduce satisfaction in the telecommunications sector, while in respect to the electricity sector, only privatization (less public ownership) has a negative effect (more vertical integration, less entry regulations and the overall reform effect have a positive effect). Since it is not possible to see how the negative reform effects are distributed among the different socio-economic groups, it cannot be excluded directly that they are stronger among the socio-economically weaker consumers. However, if the developments of the average trends of satisfaction found among groups of different education are considered, the hypothesis must be seriously questioned, because most of the considered trends show not only an overall increasing consumer satisfaction but indicate also the highest increases among the low educated consumers, which indicates, at least on the basis of consumers' satisfaction with price, a reduction of socio-economic differences.

To conclude: The elaborations have found no significant evidence that would support the empirical hypothesis. Interpreted in a broader context they indicate that the reforms are generally less important for consumers' perception of SGEI prices. However, the fact that the model may have underestimated the reform effects and that the calculations required several generalizations so that the results can reflect only a broad EU 15 average, makes clear that the interpretation are rather conditional. Consequently, further elaborations are advised, if qualified statements on the individual country level are required.

Satisfaction with Price	Telecom			Electricity			Gas	
	T1	T2	T3	E1	E2	E3	G1	G2
Male	0.008**	0.008**	0.007**	0.002**	0.002**	0.008**	0.007***	0.008***
	(0.023)	(0.023)	(0.023)	(0.023)	(0.023)	(0.023)	(0.028)	(0.028)
Education: Moderate	0.026***	0.027***	0.024***	0.003***	0.002***	0.012***	0.007**	0.007**
	(0.029)	(0.029)	(0.029)	(0.028)	(0.028)	(0.028)	(0.033)	(0.033)
Education: High	0.023***	0.023***	0.021***	0.006***	0.005***	0.024***	0.019***	0.02***
	(0.034)	(0.034)	(0.034)	(0.032)	(0.032)	(0.032)	(0.039)	(0.039)
O2: Mangers	-0.015**	-0.015**	-0.014**	0.007***	0.006***	0.029***	0.017***	0.018***
	(0.05)	(0.05)	(0.05)	(0.049)	(0.049)	(0.049)	(0.059)	(0.059)
O3: Other white collars	-0.015**	-0.015**	-0.014**	0.002	0.002	0.008	0.013**	0.013**
	(0.048)	(0.048)	(0.048)	(0.046)	(0.046)	(0.046)	(0.055)	(0.055)
O4: Manual workers	-0.021***	-0.021***	-0.019***	0.001	0.001	0.006	0.001	0.001
	(0.044)	(0.044)	(0.044)	(0.042)	(0.042)	(0.042)	(0.05)	(0.05)
O5: House persons	-0.007	-0.007	-0.006	0.006***	0.005***	0.024***	0.017***	0.018***
	(0.05)	(0.05)	(0.05)	(0.048)	(0.048)	(0.048)	(0.058)	(0.058)
O5: Unemployed	-0.044***	-0.046***	-0.04***	-0.004***	-0.004***	-0.02***	-0.018**	-0.019**
	(0.06)	(0.06)	(0.06)	(0.056)	(0.056)	(0.056)	(0.069)	(0.069)
O6: Retired	-0.015**	-0.016**	-0.014**	0.004**	0.004**	0.017**	0.009	0.009
	(0.052)	(0.052)	(0.052)	(0.05)	(0.05)	(0.05)	(0.061)	(0.061)
O7: Students	0.005	0.005	0.004	0.01***	0.009***	0.042***	0.013*	0.014*
	(0.07)	(0.07)	(0.07)	(0.071)	(0.071)	(0.07)	(0.086)	(0.086)
Age6: 15-24	-0.029***	-0.029***	-0.026***	-0.001	-0.001	-0.004	0.013*	0.014*
	(0.065)	(0.065)	(0.065)	(0.063)	(0.063)	(0.063)	(0.076)	(0.076)
Age6: 25-34	-0.054***	-0.055***	-0.049***	-0.002	-0.002	-0.008	0.003	0.003
	(0.052)	(0.052)	(0.052)	(0.05)	(0.05)	(0.05)	(0.061)	(0.061)
Age6: 35-44	-0.05***	-0.051***	-0.045***	-0.004***	-0.003***	-0.018***	-0.009	-0.01
	(0.05)	(0.05)	(0.05)	(0.049)	(0.049)	(0.049)	(0.059)	(0.059)
Age6: 45-54	-0.035***	-0.036***	-0.032***	-0.004***	-0.004***	-0.02***	-0.009	-0.01
	(0.049)	(0.049)	(0.049)	(0.048)	(0.048)	(0.048)	(0.057)	(0.057)
Age6: 55-64	-0.033***	-0.034***	-0.03***	-0.004***	-0.003***	-0.016***	-0.014***	-0.015***
	(0.042)	(0.042)	(0.042)	(0.041)	(0.041)	(0.041)	(0.05)	(0.05)
R2 Living together	-0.011**	-0.012**	-0.01**	-0.004***	-0.004***	-0.021***	-0.014***	-0.015***
	(0.043)	(0.043)	(0.043)	(0.041)	(0.041)	(0.041)	(0.05)	(0.05)
R3 Single n.l.w.p	0.02***	0.021***	0.018***	0.002	0.002	0.008	0.004	0.005
	(0.04)	(0.04)	(0.04)	(0.038)	(0.038)	(0.038)	(0.046)	(0.046)
R4: Single divorced…	-0.023***	-0.023***	-0.021***	-0.002**	-0.002**	-0.011**	-0.005	-0.005
	(0.034)	(0.034)	(0.034)	(0.033)	(0.033)	(0.033)	(0.04)	(0.04)
R5: Widowed	0	0	0	0.003**	0.003**	0.015**	0.009*	0.009*
	(0.043)	(0.043)	(0.043)	(0.042)	(0.042)	(0.042)	(0.05)	(0.05)
Fr/Be/Fr	0.277**	0.245**	0.272**	0.615***	0.61***	0.56***	0.06	0.009
	(0.634)	(0.6)	(0.592)	(0.631)	(0.615)	(0.573)	(1.246)	(0.09)
Nation3: Netherlands	0.25***	0.24***	0.262***	0.285***	0.291***	0.655***	0.067***	0.064***
	(0.173)	(0.153)	(0.161)	(0.554)	(0.511)	(0.482)	(0.284)	(0.096)
Nation4: Germany	0.562***	0.51***	0.577***	0.074	0.055	-0.122***	0.048	0.017
	(0.944)	(0.874)	(0.874)	(0.794)	(0.767)	(0.31)	(1.747)	(0.191)
Nation5: Italy	0.127	0.081	0.18**	0.034***	0.031***	0.022	0.064	0.047***
	(0.594)	(0.488)	(0.51)	(0.191)	(0.19)	(0.149)	(0.942)	(0.142)
Nation6: Luxembourg	0.142**	0.179***	0.086				0.044	0.06
	(0.42)	(0.364)	(0.379)				(0.602)	(0.531)

Table 5: Regression Results (Continues in the following page)

Satisfaction with Price	Telecom			Electricity			Gas	
	T1	T2	T3	E1	E2	E3	G1	G2
Nation7: Denmark	0.295***	0.273***	0.345***	0.508***	0.512***	0.71***	0.102***	0.106***
	(0.22)	(0.167)	(0.163)	(0.615)	(0.58)	(0.584)	(0.677)	(0.258)
Nation8: Ireland	0.077**	0.056**	0.134***	0.407***	0.424***	0.722***	0.068	0.068***
	(0.244)	(0.17)	(0.168)	(0.776)	(0.725)	(0.68)	(0.778)	(0.227)
Nation9: UK	0.575***	0.513***	0.633***	0.285***	0.247***	0.018	0.046	0.031***
	(0.797)	(0.674)	(0.714)	(0.625)	(0.618)	(0.125)	(1.499)	(0.118)
Nation10: Greece	-0.04*	-0.044*	-0.014	0.227***	0.238***	0.507***		
	(0.198)	(0.194)	(0.157)	(0.746)	(0.701)	(0.685)		
Nation11: Spain	0.116**	0.083**	0.168***	0.348***	0.337***	0.297***	0.034	0.046***
	(0.345)	(0.233)	(0.26)	(0.492)	(0.481)	(0.408)	(0.853)	(0.111)
Nation12: Portugal	0.016	0.003	0.048**	0.418***	0.424***	0.557***	0.04***	0.043***
	(0.202)	(0.159)	(0.161)	(0.676)	(0.641)	(0.65)	(0.175)	(0.132)
Nation13: Finland	0.31***	0.322***	0.285***	0.441***	0.446***	0.588***		
	(0.246)	(0.242)	(0.192)	(0.686)	(0.655)	(0.665)		
Nation14: Sweden	0.272***	0.288***	0.23***	0.126***	0.134***	0.505***	0.086***	0.097***
	(0.169)	(0.157)	(0.143)	(0.659)	(0.615)	(0.58)	(0.598)	(0.377)
Nation15: Austria	0.059***	0.064***	0.054***	0.361***	0.368***	0.61***	0.026**	0.029**
	(0.14)	(0.138)	(0.105)	(0.635)	(0.596)	(0.598)	(0.133)	(0.13)
Year: 2002	0.031***	0.029***	0.033***	-0.005***	-0.005***	-0.027***	0.031***	0.032***
	(0.056)	(0.049)	(0.053)	(0.05)	(0.05)	(0.048)	(0.092)	(0.052)
Year: 2004	0.103***	0.099***	0.102***	-0.007***	-0.006***	-0.037***	0.035**	0.028***
	(0.092)	(0.082)	(0.088)	(0.085)	(0.085)	(0.082)	(0.178)	(0.06)
GDP	0	0	0*	0***	0***	0***	0	
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
HICP	-0.005	-0.004	-0.008**	-0.006***	-0.005***	-0.028***	-0.017***	-0.022***
	(0.034)	(0.033)	(0.032)	(0.033)	(0.032)	(0.031)	(0.051)	(0.04)
Price Tax incl.	0.55***	0.57***	0.486***	-0.031**	-0.027**	-0.158*	-0.02***	-0.021***
	(0.466)	(0.45)	(0.445)	(1.741)	(1.732)	(1.72)	(0.02)	(0.019)
Entry Reg ETCR	0.029***	0.031***		-0.003***	-0.003***		-0.005**	-0.003**
	(0.04)	(0.039)		(0.02)	(0.02)		(0.02)	(0.011)
Public Ownership	0.006			0.014***	0.012***		-0.01	
	(0.057)			(0.1)	(0.099)		(0.233)	
Market Structure	0.018**	0.019**					0.009**	0.009**
	(0.054)	(0.054)					(0.041)	(0.041)
Vertical Integration				-0.000			0.006	
				(0.015)			(0.048)	
Sector ETCR			0.057***			-0.013***		
			(0.067)			(0.029)		
Observations	39685	39685	39685	41024	41024	41024	29310	29310
Nagelkerkes R-Quadrat	0.144	0.144	0.144	0.088	0.088	0.087	0.107	0.107
No. of satified people	21774	21774	21774	24428	2448	2448	18303	18303

Coefficients show average marginal effects. All estimates are weighted using sampling weights EU15 provided.

Source: Authors' calculations using Eurobarometer. ECTR and Eurostat data.

Significant at * p<0.10; **p<0.05; ***p<0.01.

6. Conclusion

Even after three decades, NPM market-style reforms for SGI and the controversy about their socio-economic effects are still an actual and important topic on the European policy agenda. While recent research indicates that market based service provision may increase the vulnerability of certain socio-economic groups (Clifton et al. 2011) and that it could foster the inequality gap between consumers who differ regarding their individual capacity of acting within a market based service system (Jilke, Van de Walle 2011), the EC has recently reaffirmed that it considers market-style reforms as the best way to ensure a socially unbiased and secure SGI provision (COM 2012). Against this backdrop, this study dealt, on theoretical and empirical basis, with the hypothesis that especially well educated and wealthy citizens have benefited from NPM market-style reforms on SGI, while the position of the more vulnerable citizens vis-à-vis these services has weakened.

Starting with the empirical part that focused on the socio-economic reform effects on consumers' subjective perceptions (5.4); the results for the price satisfaction model can confirm that socio-economically weaker consumers are indeed less likely to be satisfied with service prices, moreover the results show that the effects of the different reform measures are both sector intern and extern far from uniform, which both matches with the findings of the other studies in this area (Fiorio et al. 2007; Bacchiocchi, Florio, and Gambaro 2008; Clifton et al. 2011; Fiorio and Florio 2011). However, the results provide no evidence to support the assumption that the reforms had reduced satisfaction among the weaker consumers and simultaneously increased it among the other ones. Still, given the models' limitations (4.4) the results cannot be used to reject the empirical hypothesis, although, considering the EU 15 average trends found for satisfaction among groups of different education, it can be seriously questioned.

So cautiously speaking the findings suggest that NPM market-style reforms of telecom, gas and electricity services in the EU 15 are not especially relevant for subjective satisfaction with the respective service prices. However, if their influence is still to be considered it is possible to say that there is evidence that satisfaction with telecom service prices is higher if the sector is not entirely without regulation while less regulation together with public participation seems to benefit satisfaction with electricity prices. Given the relatively broad findings and the many methodological restrictions, the classical objective welfare analysis becomes despite its complexity a little bit more attractive. But bearing in mind the pro and cons of the different approaches (3.2), I am still of the opinion that subjective perceptions and surveyed evidence can be valuable contribution in evaluation research, especially if quality of life is involved. So even if this approach on subjective price satisfaction was only of limited use to provide evidence in relation to hypothesis, the further exploration of adequate survey data still seems promising to me. The approach from Jilke and Van de Walle (2011) that focuses on behavior in form of submitted complains can be one positive example in this context even, if it is also subjected to the limits of the Eurobarometer, which design with its frequently changing questions prevents comparisons over longer periods of time. Given the latter as well as the many others, partly incomprehensible, shortcomings of the Eurobarometer, further research in this area certainly requires the search for an additional more substantial data sources. Anyway, given the increasing amount of possible data sources that derive form the technical progress, the prospects for further empirical research look generally rather promising.

Turning to the elaborations concerning the theory, the study showed the potential of the market-style reforms to improve general socio-economic welfare, however, the affiliated discussion of possible general and consumer-specific effects made also clear that, even if equal benefits for all consumers are possible, other scenarios, such which are justifying the hypothesis, are definitely more than conceivable as well. In short, the findings showed that regulated markets can be beneficial to everyone, but benefits are often likely to increase proportional with the individuals' capability to process options and information. An individual focus on the other hand is likely to reduce the collective realm and may therefore reduce solidarity and equity. Consequently socio-economically weaker consum-

ers, who usually depend more on collective solidarity and are more limited in their individual opportunities, are more at risk due to the reforms, but gain eventually less than socio-economic stronger consumers, whose risk-benefit ratio can even turn out as the exact opposite to that of socio-economic weaker consumers.

In a wider perspective, the elaborations showed the importance of opportunism and regulation in respect to the general debate on efficiency and equity. Opportunism, I think, takes a central role here because as the theory clearly indicates it is not only a major reason for the problems of both bureaucratic steering and public management, but conversely also a crucial element of the efficiency strategies of the new public management, or economic and political theory in general. Since, the cost for bureaucratic steering must be considered too high, especially against the background of diminishing resources, public services need to be more and more privatized and organized in market oriented structures. However, given the fact that opportunistic behavior can lead only to more efficiency if proper rules, regulation and controls exist, but can become extremely costly if they do not, I think that 'proper regulation' is another important key word here. Thus, in my opinion the basic theories behind the public management offer already a sound framework for an efficient organization of SGI or the public sector in general, so that actual and future research should continue to work on understanding and improving the insides of this theoretical framework. In this context, extern as well as intern empirically based evaluation research becomes definitely more and more important, to allow for a more exact determination of the causes and nature of a certain effect. If a reform is found to increase inequalities, it is necessary to know about the nature of these inequalities, because it is an important difference between a reform that lets all people benefit, even though not equally, and a reform where only some people benefit and that eventually even at the expense of others. In any case, achieving equality is neither permanently possible nor does it make always sense. Naturally, this does not mean that it is not important for European policy to achieve the best possible social protection and SGI provision, but given that opportunism will also stay an essential driver to generate the assets that allow achieving a high quality service supply in the first place, certain inequalities are part of the process.

Finally, for further research on this topic, an examination of consumers' behavior in matters of switching providers seems particularly promising. Because, with the process of switching getting more and more easy, the required level to benefit are constantly reduced, while on the other hand, people who economically not necessarily depend on the an extra surplus could feel disturbed. Therefore, the option to switch providers may even have an opposite effect by raising satisfaction of socio-economic weaker people while decreasing satisfaction among higher educated people.

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Appendix

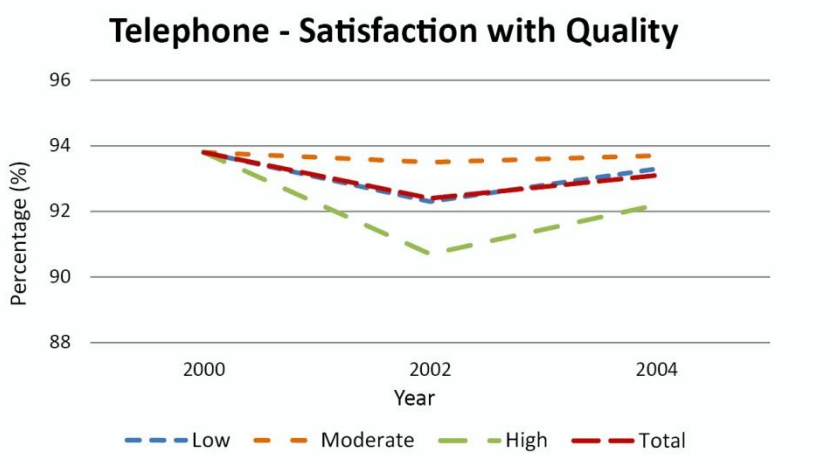


Figure 7: Telecommunication: Satisfaction with Quality EU 15 Average (Source: Eurostat).

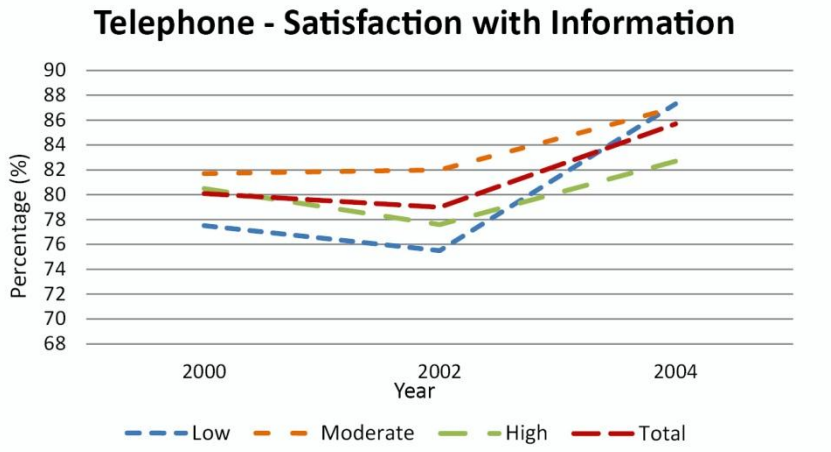


Figure 8: Telecommunication: Satisfaction with Information EU 15 Average (Source: Eurostat).

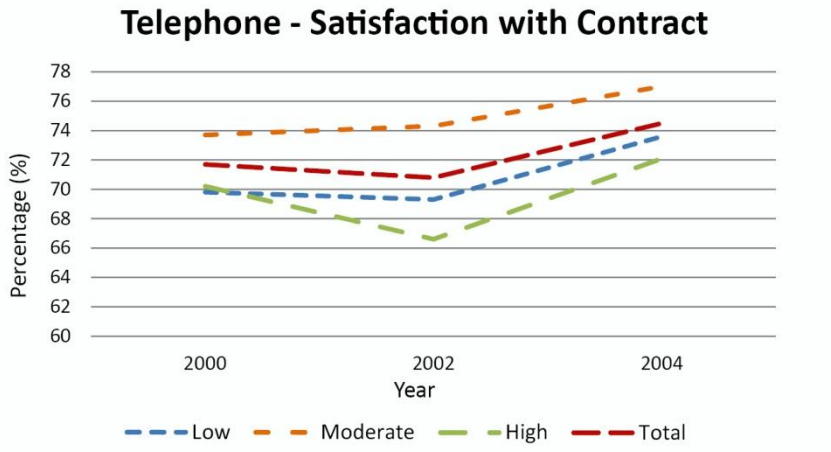


Figure 9: Telecommunication: Fairness of Contract EU 15 Average (Source: Eurostat).

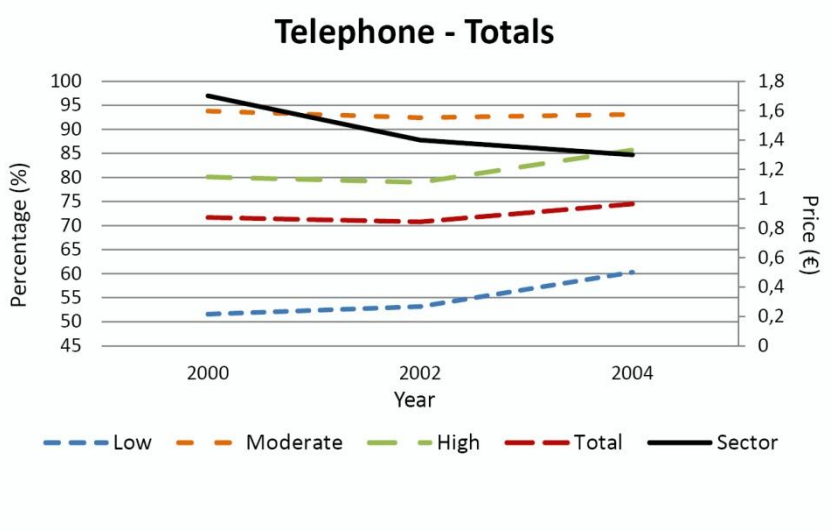


Figure 10: Telecommunication: Totals EU 15 Average (Source: Eurostat).

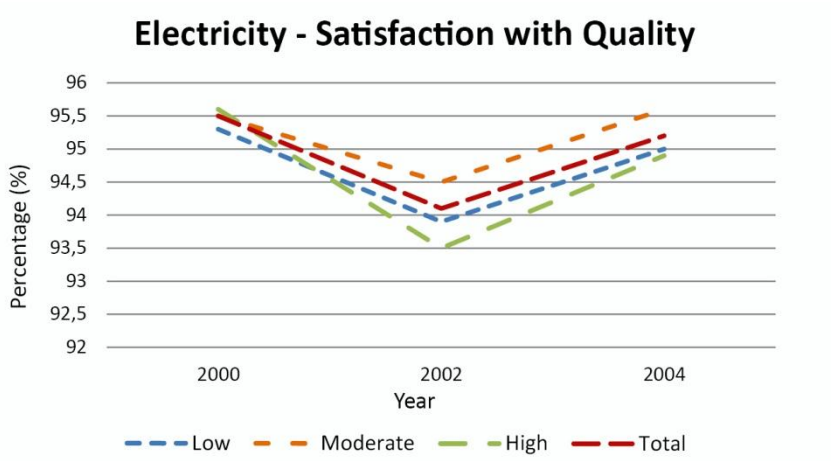


Figure 11: Electricity: Satisfaction with Quality EU 15 Average (Source: Eurostat).

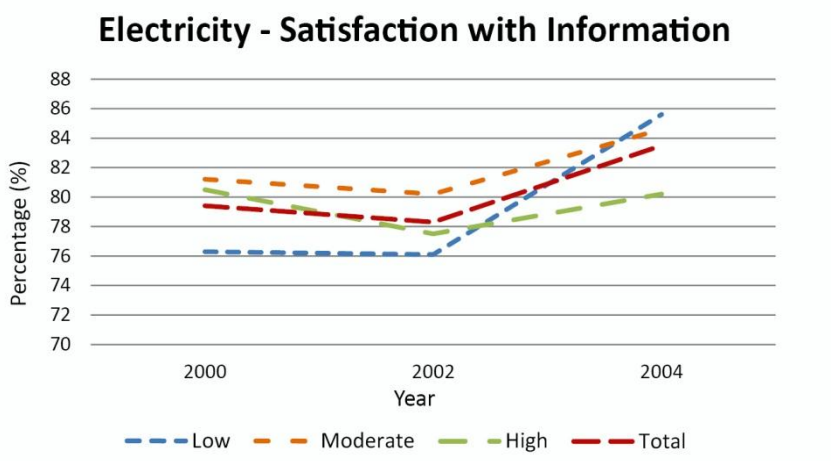


Figure 12: Electricity: Satisfaction with Information EU 15 Average (Source: Eurostat).

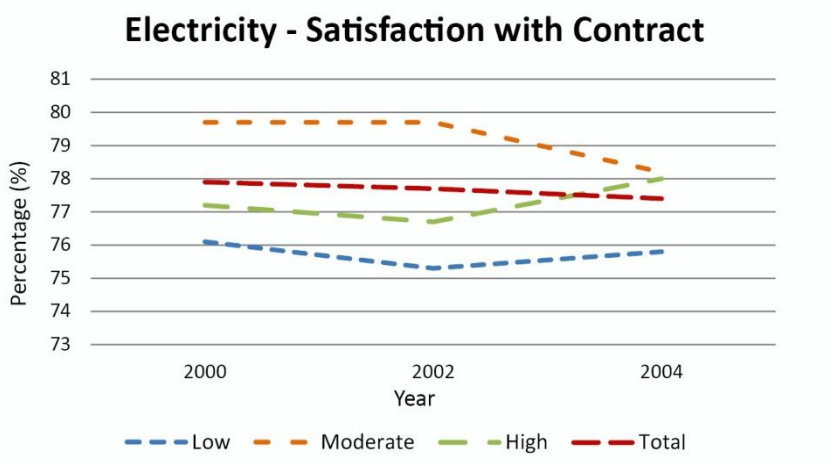


Figure 13: Electricity: Fairness of Contract EU 15 Average (Source: Eurostat).

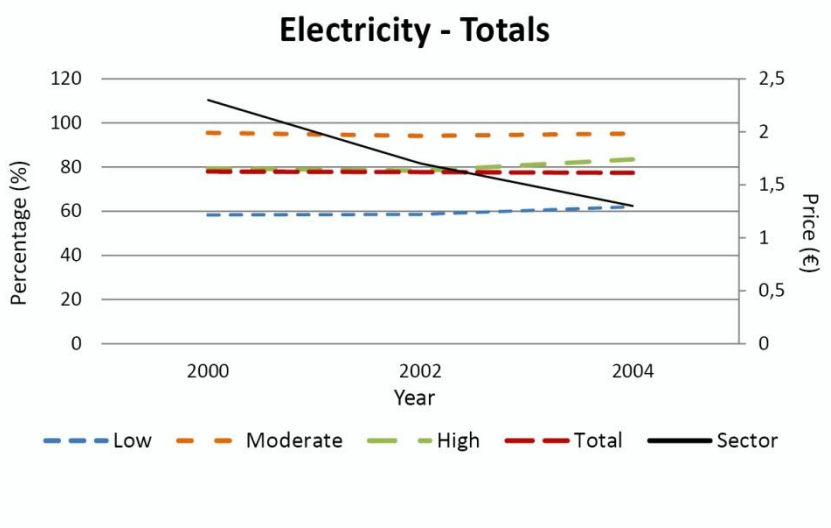
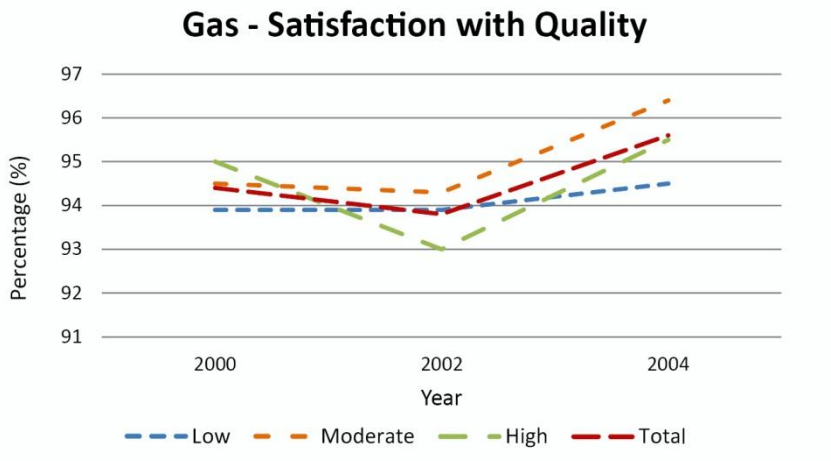


Figure 14: Electricity: Totals EU 15 Average (Source: Eurostat).



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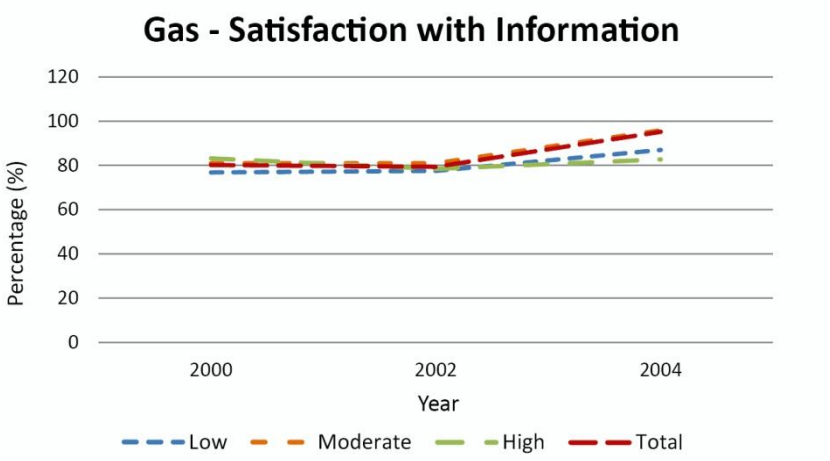

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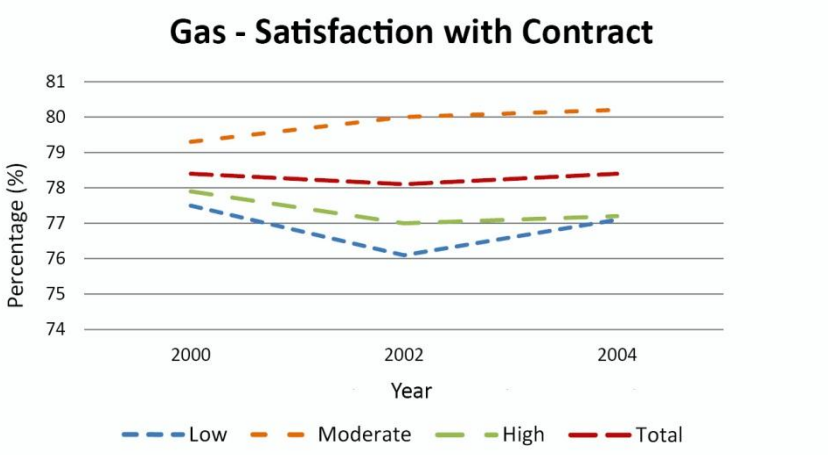

Figure 17: Gas: Fairness of Contract EU 15 Average (Source: Eurostat).

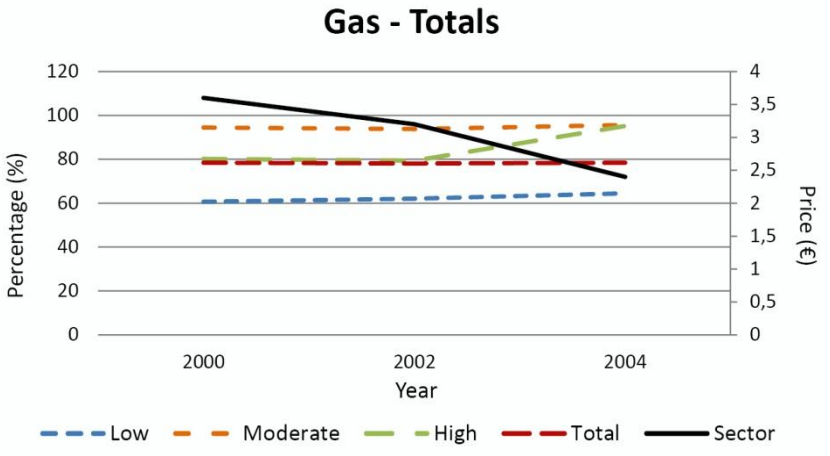

Figure 18: Gas: Totals EU 15 Average (Source: Eurostat).