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## **Regulatory Governance Costs in Network Industries: Observations in Postal Regulation**

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### **Abstract:**

*The various actors in the regulated industries relate to each other within a broader institutional framework, i.e., by way of formal and informal rules. An important role in the implementation of liberalization processes is given to regulation and thus to regulatory institutions. The rationale for regulation is its positive effect on society by correcting market failures. But regulatory intervention also causes costs which we call “costs of regulatory governance”. These costs result from negative consequences caused by regulatory requirements and from the implementation of regulatory instruments. These costs will depend upon the formal and informal rules among the involved actors, upon the allocation of property rights among these actors, as well as upon the various principal-agent or more generally contractual relationships among these actors. We distinguish between direct and indirect costs of regulation: Direct costs occur in relation with the institutional design of the regulatory framework and the behavior of actors. Indirect costs result from distortive incentives and finally turn out in an inefficient supply of goods and services. Using the example of the Swiss postal market we offer a first outline of a possible application of the framework. In this article we neither intend to quantify regulatory costs nor do we question regulation per se. We rather present a qualitative framework which helps to structure a discussion about regulatory challenges in network industries.*

### **Key words:**

Regulation, Postal Sector, Regulatory Governance Costs, New Institutional Economics,  
Regulatory Challenges

## 1. INTRODUCTION

The European network industries are currently undergoing a profound and ongoing reform, which aims to promote competition while simultaneously maintaining a high level of universal services. Different factors contribute to a successful liberalization of these markets: Economic criteria for a successful liberalization of network industries in general and of the postal sector in particular would – for example – be static and dynamic efficiency gains of the companies involved, but also of the industry as a whole. Social criteria for a successful liberalization would be affordable prices for private consumers, good quality of services, but also a comprehensive access to infrastructure services. A purely technical success factor of the liberalization (which plays a rather subordinate role in postal markets) might be whether the infrastructure system remains stable as a whole.<sup>1</sup>

Regulation plays an important role in the implementation of successful liberalization processes. The original rationale for state intervention in markets and network industries in the form of regulation is to correct market failures: (1) to stimulate competition where it is inexistent or poor, (2) to guarantee a minimum level of public service and (3) to ensure the efficient use of network infrastructures. Regulation should therefore have positive effects on social welfare. However, net benefits to society can only be achieved if regulation provides benefits that are greater than its costs: Regulatory intervention has not only positive consequences for the market and its development.<sup>2</sup> The regulatory state intervention into the market also causes costs which we call costs of regulatory governance. Costs of regulatory governance can result from consequences caused by the behavior of regulators, regulatory requirements as well as from the implementation of regulatory instruments. Thus, building a systematic approach to evaluate and analyze regulatory governance costs and their impact on the developments of markets, infrastructures as well as on society is an essential challenge.<sup>3</sup> In this article we define a generic analytical framework of costs of regulation in the network industries. Using the example of the Swiss postal market we give a first outline of a possible application of the framework. It is not our goal to break down the costs of regulation in a numerical and quantitative manner nor to question or even criticize regulation per se. We rather investigate under what premises regulation causes more drawbacks than advantages and what the effects of regulatory interventions can be on the network industries.

The paper is structured as follows: in section two, we define the cost of regulatory governance and describe direct and indirect costs of regulation from a theoretical perspective. In section three, we introduce the postal market and its characteristic attributes. In the fourth section, we show how the regulatory environment in the Swiss postal market is designed and draw conclusions based on the analytical framework of regulatory governance costs. We summarize our findings in the final section.

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<sup>1</sup> See. Finger (2006).

<sup>2</sup> See Armstrong and Sappington (2006) section 6 about “Entry assistance and anti-competitive liberalization policies”.

<sup>3</sup> See Deighton-Smith (1997) for an analysis of regulatory impact and best practices as well as Hopkins (1997) for an earlier contribution on indicators of regulatory costs. Den Butter et al (2009) analyze costs and benefits of government regulation based on the transaction cost approach. Schatz et al (2009) develop a regulatory cost model.

## 2. COSTS AND EFFECTS OF REGULATION: REGULATORY GOVERNANCE COSTS

The original rationale for state intervention in markets (respectively in network industries) was the correction of market failure, i.e. (1) to stimulate competition where it is inexistent or poor, (2) to guarantee a minimum level of public service and (3) to assure the efficient use of the network infrastructure. Regulation should therefore have a positive effect on the economic and social welfare.<sup>4</sup> However, governmental regulatory intervention also causes costs. In determining the optimal regulatory intervention it is therefore necessary – as for other projects - to analyze the costs as well as the benefits of regulation.

The various actors in any industry in general and in network industries in particular relate to each other within a broader institutional framework, i.e., by way of formal and informal rules. The operation of such an institutional framework as well as its impact on all actors has a cost, which we describe as “costs of regulatory governance”.<sup>5</sup> According to new institutional economics, these costs will depend upon the formal and informal rules among the involved actors, upon the allocation of property rights among these actors, as well as upon the various principal-agent or more generally contractual relationships among these actors. At the most general level new institutional economics reaches the conclusion that regulation has a cost, which can be of course optimized, but which nevertheless will be unevenly distributed among the actors of the broader institutional framework.<sup>6</sup> Arrow (1969) defines transaction costs as the “costs of running the economic system” (p.48). Through the lens of transaction cost economics as well as agency theory, different modes of regulation can be described as alternative modes of governance which are well suited for some objectives but purely suited for others. The transaction cost approach interprets governance as organizing transactions in order to economize on transactions. Williamson (1998) briefly sketches out the transaction cost economic perspective of the public bureau. He describes the public bureau as an alternative mode of governance which is well-suited for some purpose but poorly suited for others.<sup>7</sup> We assume that these costs are inherently present in any institutional arrangements and as such are determined by (1) the institutional design and the alignment of competences (rules and actors), (2) the choice of regulatory instruments as well as (3) the behavior of the actors within an institutional framework.

In line with Bauer (2005) and his definition of administrative burdens we describe governance costs in a regulatory context as the costs related to tasks performed to sustain competitive but fair markets, set incentives for involved actors to provide a certain level of public service, and to coordinate public authorities involved in regulation.<sup>8</sup>

In the following we distinguish between direct and indirect costs of regulation. Direct costs occur in relation with the institutional design of the regulatory framework and the behavior of

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<sup>4</sup> See Stigler (1971) and Peltzman (1976) on the theory of economic regulation.

<sup>5</sup> Dassler (2006) defines regulatory governance as the “way the regulatory office acts under the aegis of the government, in the form of legislative acts and other forms by which control can be maintained over the regulated sector” (p.33).

<sup>6</sup> Similar work on costs and benefits of government regulation is done by den Butter et al (2009).

<sup>7</sup> See Arrow (1969) Williamson (1998 and 1999) as well as Estache and Martimort (1999) to learn more about transaction cost economics and its application in the public sector. Furubotn and Richter (1992) describe the transaction cost approach as “most easily understood as embracing all those costs that are connected with (i) the creation or change of an institution or organization and (ii) the use of the institution and organization (p.8)”.

<sup>8</sup> We assume that regulatory governance costs differ in different regulatory situations and the degree of liberalization. But at this stage of research we are not yet able to identify the level of costs in a particular regime. There is a need for further research and investigations several network industries that allows for comparison.

actors. Whereas the indirect costs arise because of false incentives and finally turn out in an inefficient supply of goods and services. The amount of direct cost may in some cases be quantified (e.g. the annual budget of regulators or administration costs). In contrast to direct costs the indirect costs and their negative impacts are often hardly quantifiable and may have to be analyzed on a qualitative basis.<sup>9</sup> Table one summarizes the different types of regulatory governance costs.

## 2.1 Direct Costs of Regulation

As mentioned above, regulatory interventions in markets are not costless. On the one hand the institutional regime has to be defined. On the other hand the relevant authorities have to be set up and furthermore get granted with the resources which enables them to monitor markets as well as the involved actors and consequently to implement the regulatory guidelines. This includes the creation of independent bodies which control the activities of regulatory authorities and coordinate different authorities involved in regulation (e.g. competition regulators vs. sector-specific regulator) and compliance requirements.

### Monitoring costs

Monitoring costs are costs that arise with the supervision of various agents assigned with regulatory intervention. If the free market does not result in an economic or social desirable outcome, the desirable result may be provided or at least stimulated by the State. A principal-agent problem occurs if the state doesn't provide the required service by itself (e.g. through a state owned enterprise): First through the delegation of the surveillance to one or more specialized authorities and second through the relation of the regulator to the designated operator. In the first case the political principals define the agents (the regulatory authorities) respectively their design, their goals and competences, furthermore they designate the agencies' head and finally monitor the activities of regulatory bodies. The original rationale of the transfer of regulatory tasks and the control of the regulatory process to regulatory authorities is based on the assumption that the transaction costs of a change in regulation (and in a sector) are much lower when decisions are made by specialized authorities than implemented through statutory changes within political institutions. Posner (1974: 350) argues that for instance the size of parliaments leads to circumstance that politics delegates recurring decisions and functions, which require a certain expertise, to specialized authorities and organizations. Thus, the statutory or regulatory guidelines are mostly designed in a way that regulators have the power, to choose under different regulatory measures or instruments to achieve the regulatory goals defined by their principals.<sup>10</sup> Even if the total transaction costs are lower, the delegation of the regulation from the political authorities to a specialized authority causes (from a principal-agent perspective) monitoring and information costs. In a dynamic regulatory context, regulators have their own interests: They behave discrete and strategically as well as try to expand their powers vis-à-vis the other actors.<sup>11</sup> Regulators may well tend to act in their own interests and contrary to the intentions with which they were originally established, and their activities have to be monitored. Monitoring costs arise because the agents (regulatory authorities) do not pursue exactly the same objectives as their principals. Agent's actions must though either be guided by (inefficient) incentive contracts or tightly monitored and controlled by their principals.

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<sup>9</sup> See Oxera (2004:15).

<sup>10</sup> See Knieps (2007: 185).

<sup>11</sup> Prior research highlights that regulatory agencies' objective functions are multidimensional, e.g.: regulators tend to maximize their budgets, enlarge the number of employees or enhance career prospects and political reputations (Mueller 2003; Wheatley 1971).

Another serious principal-agent type problem, which is related to monitoring and information costs, is the relationship between regulators and the regulated companies. Thus in regulated network industries there occur principal-agent chains: The government or the ministry have to control the regulatory authorities, because they benefit from a better expertise and knowledge in the regulated industry as well as superior information. Furthermore, regulatory authorities (both sector-specific as well as competition authorities) have significant information problems in the relationship with the companies and markets they monitor. There is a lack of knowledge about the technologies used and the pattern of demand in the markets they regulate.<sup>12</sup> The principals also hardly know the cost structure of operators, their internal incentive systems, as well as the contracts with other suppliers and customers.<sup>13</sup>

Monitoring costs may not always be clearly quantified, but may be related to personnel costs, consultancy fees, costs of administrative overhead and resource consumption. These costs are not static in the long-run, they rather change because of external - often political - influences and e.g. if the objectives of the regulation change or whenever new regulatory tools /mechanisms get implemented.

### **Coordination costs**

We call costs which are related to coordination within the regime *coordination costs*; this second direct governance costs underlies the assumption that there is more than a single institutional actor involved in regulation. Apart from a sector specific regulatory agency ministries and competition regulators play also important roles in regulatory regimes. Böllhoff (2005, p. 16) describes a political administrative context, where regulatory regimes even include more than these three institutions: besides the sector related ministries, departments like the treasury can be involved in regulatory processes. Administrative courts may also play a crucial role in decision-making processes. Furthermore, parliamentary actors and committees have an impact on regulatory regimes since they try to influence the evolution of the regulatory environment in consideration of their political attitudes.

There is a strong need to coordinate the different institutional actors and their activities, in order to avoid over regulation and overlapping regulatory competences. In line with Bauer (2005, p.56) we suggest, that the more dispersed the regulatory regime becomes (ministries, regulators, competition authorities) the more likely are administrative fights over power and competences. Furthermore, based on theories of bureaucratic politics and organizational behavior, we assume that the involved public authorities try to seek to enhance or at least to stabilize, their own role in the regulatory system (Bauer, 2005, p.56).

Stemming from the fact that different regulators and institutional actors – like e.g. the sector specific regulatory agency and the traditional competition regulator – are intervening into a sector, the different authorities need to be coordinated. If coordination is not optimal, there are probably many additional costs resulting from the duplication and inconsistencies of the activities. A further source of governance costs which are related to coordination are the various additional costs caused by court cases and different types of watchdogs. However, a proper definition of competences of different regulators as well as an adequate level of standardization may lead to a reduction of coordination costs.

### **Compliance costs**

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<sup>12</sup> See Armstrong/ Sappington (2006: 330) about the control of regulators over monopolists and information asymmetries.

<sup>13</sup> See Estache/ Martimort (1999).

Compliance costs are the costs of the industry actors which have (1) to comply with regulatory guidelines and (2) to provide information to regulatory authorities. They are beared by the operators and also related to principal-agent problems. Since the historical operator is generally more heavily regulated than its competitors (through asymmetric regulation) and designated to render a certain level of universal service, the historical operator is likely to bear the largest portion of the compliance costs.

Compliance costs result from the fact that the operators have to comply with regulatory directives. Moreover they have to be in good terms with the regulator (e.g. bonding costs). The costs are particularly high when regulatory guidelines change radically or get slightly modified. Costs of compliance do not only arise in compliance departments or departments of regulatory affairs. In most cases these costs are spread over all departments or business units. The drivers of these costs include costs like labor costs, costs of administrative overheads, legal expenses and consultancy fees as well as costs that occur in order to adjust to new regulatory requirements.

Regarding monitoring and compliance costs Coen (2005, p. 377) states that there emerges something like a resource dependency between regulators and regulated firms. In order to achieve his mandate, the regulators try to gather detailed information on and gain credibility in the market they regulate. At the same time the regulated business wishes to understand the regulatory principles and processes and is likely to exert influence on the development of regulatory institutions and the regime.

## **2.2 Indirect costs and effects of regulation**

The original model of perfect competition leads to many desirable results: only the most efficient suppliers survive and produce at the lowest possible prices, prices are optimal, consumer welfare is at its maximum and consumers can't get better off without making any other worse off. The original rationale for government intervention and the introduction of regulation in network industries was the correction of market failures linked to persistent monopolistic bottlenecks. The result of regulatory intervention (such as network access or price regulation) is ideally positive, thus an existing market failure is corrected. But if economic regulation is more costly than beneficial, it results in a overall welfare loss. Indirect costs of regulation do rarely arise because of the institutional design of the regulatory system, they are rather a consequence of the mode of regulation and the instruments implemented to achieve the regulatory objectives. The economic assumption was that without regulatory intervention, prices will be too high, restricting demand and creating excess profits; all these inefficiencies lead to high social costs and a loss of welfare. But it may come about that policy makers and/or regulators use wrong or imperfect models to guide their decisions, with a major impact on the investment incentives of firms, a misallocation of resources and a lowering of social welfare. The indirect negative effects of regulatory governance may result from a distorted static and dynamic allocation through improper pricing, technology choice and innovation incentives. The characteristics of these issues are often a result of regulatory governance respectively regulatory decisions.

Therefore we call negative consequences and effects of regulation for the market efficiency costs. The overall assumption of efficiency costs is that while the objective of regulatory intervention is to improve market functioning, actions of regulators can have unintended negative outcomes as well. These outcomes may have effects on the nature of the market and the availability of products provided in the market, consumer choice, the level of innovation or even discourages firms from entering into markets.

Regulatory failure might for example occur because some regulatory mechanisms work adequately in a particular sector or country, but do not consequently result in the same outcome in another sector. Regulatory mechanisms do not work adequately in other markets or industries without any adjustment. Therefore the choice of adequate or optimal regulatory tools and mechanisms is often related to specific characteristics and the market structure in a particular industry or geographical market.

The important questions regarding indirect costs of regulation or efficiency costs are whether adequate regulatory models and methods are implemented and if the chosen means are capable to correct a market failure rather than result in regulatory failure.

### **Market and prices**

Crew and Kleindorfer (2006) argue that price regulation does not necessarily result in economically optimal prices in monopolies. The optimal (Ramsey) access price, for example, considers not only the marginal costs but also the price elasticity of demand and the substitutability between the full service and partially access to sub-processes. The determination of Ramsey charges in practice often fails by reason of its sophisticated econometric calculation and the analysis of costs.<sup>14</sup> Whenever regulators try to determine the efficient Ramsey price, they face considerable information asymmetries because they have to know price elasticities as well as the marginal costs of the operators. This information may be inaccurate or simply not available. Crew and Kleindorfer (2006: 74) conclude that due to the predominant information asymmetries expectations from Ramsey price regulation as well as the incentive regulation intended to motivate operators toward more efficient pricing and production is limited. These instruments are not likely to result in efficient pricing. According to Knieps (2005) regulators should not oblige operators to rigid pricing structures since this constrains the entrepreneurial initiative for innovative pricing. Furthermore it is possible that more favorable pricing rules and tariff systems are found in the future. The development of innovative pricing schemes should be open to all competitors (incumbents and new entrants) and not be hindered by inadequate authorization procedures of regulatory authorities. If some pricing systems can be offered exclusively by entrants, this will constitute a structural handicap for competition and a discrimination for other operators. Moreover, the pricing structure of a functioning market is an important signaling function for new competitors: If prices are cut too deep through price regulation it may prevent potential competitors from market entrance.

Other factors associated with the development of a market are structural or institutional entry restrictions. A general attribute of network industries is that governments (or regulators) grant licenses and concessions. The aim of the licensing system is (1) to oblige the operators to render a certain level of public services or (2) conversely to limit the scope of the provided service. But who defines due to which information what the optimal and efficient number of operators in the market is? Depending on the criteria applied, there are different effects on competition.<sup>15</sup>

Another restriction with effects on the market may be the setting of minimum wages. The setting of minimum wages in the German postal sector shows that potential competitors have

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<sup>14</sup> See Elsenbast (1999: 59).

<sup>15</sup> For example, in 2000, the Swiss government tendered four UMTS licenses in the telecom market. Even if rational considerations led to the perception that the number of licenses is four, this does not necessarily imply that four players are the optimal number of competitors. See Vantomme/ Fratini (2008) to learn more about licensing systems in the postal sector.

not entered the German market.<sup>16</sup> This measure and the exemption of Deutsche Post DHL from VAT are criticized by many competitors (especially TNT) as being market access barriers: Noting that market deregulation in Germany is incomplete the Dutch government has therefore already postponed complete liberalization twice. The example of Germany shows that not only no new competitors entered the market, but also the opening of a foreign postal market has been delayed.

Other negative consequences of regulatory intervention (and thus constituting cost of regulation) may occur by weighting market power and distortion of competition against efficiencies in the market. Thus potentially anti-competitive mergers, agreements or business practices could also have positive effects on the market. While a merger leads to a higher concentration of firms in a market, it also lowers costs through economies of scale. Exclusive supply or purchase contracts may result in more efficient sales and improved information exchange, but also protect operators from (desired) competition.<sup>17</sup> This does not imply that competition regulation in general, and merger control in particular has just negative effects on markets. However, the principals should take in consideration that potentially positive market developments may be prevented by this type of regulation.

### **Investments (and technology)**

An excessive regulation with rigid social, regional or even environmental objectives might prevent the regulated operators from aligning their supply with the effective demand and the consumer needs. This may adversely affect investment activities: regulation should provide innovation and investment incentives in a manner that allows the companies to exploit their investments. As long as the incentives and protective measures are sub-optimal and don't protect investments, there is less innovation and no investment in new technologies in the sector. In turn the market may not develop to the desired extent.

An illustrative example for this kind of phenomenon is access regulation to monopolistic bottlenecks. Access regulation leads to a situation where access prices are under constant pressure by the customer. Thus access customers are interested in low prices to cut their costs and to offer their services below the incumbent's price level. However, the owner of the monopolistic bottleneck is traditionally motivated to negotiate access prices as high as possible. The incentives for innovation are therefore negatively influenced by the fact that one the one hand the facilities' owner is not interested in developing its facilities and pass its efficiency gains to rivals at a low price. At the same time, other operators or new entrants have little incentives to invest in their own infrastructure and potential substitutes. The problem gets even worse if regulators set access prices ex ante and on a low level. Depending on the characteristics of the industry it might happen that the more efficient market situation rather results from no regulation than from too rigid regulatory rules.

Knieps (2005) as well as Sidak and Spulber (1998) argue that potential new competitors have no incentive to enter a market with a new technology, if they can buy the necessary capacity at the same (or even better) conditions from the incumbent and fulfill parts of the services by means of the existing infrastructure. This is increasingly the case, if entrants have reasons to fear that the new technology is substituted by more efficient solutions and therefore devaluated in a short time period. Furthermore the incumbent operators lack incentives to invest in the network infrastructure because they can hardly expect to recover their capital expenditures.

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<sup>16</sup> See Ecorys (2008).

<sup>17</sup> See Oxera (2004:15).

A crucial question related to investments is: Who bears the risks? There are not only technological and systemic risks<sup>18</sup>, but also risks and uncertainties in relation to regulation and the socio-political goals of universal service. Investment activities and thus the development of an efficient market are seriously constrained if these risks are unilaterally borne by the incumbent operators.

### **Regulatory dynamics**

Knieps (2005) argues that many monopolistic bottleneck areas in dynamic sectors gradually disappear by reason of rapid technological progress. Due to the emergence of intermodal competition it is actually possible that the original need for regulatory intervention disappears. The regulatory interventions (especially its necessity) are to be reviewed regularly. In this context two categories of possible regulatory failures exist: First, a "false positive" occurs when regulators intervene in the market while competition is functioning and there is no need for intervention. Second, a "false negative" occurs when regulatory authorities do not intervene, whereas the need for regulatory intervention exists from a competition-policy point of view. Other potential negative impacts of regulation arise because of a lack of regulatory dynamics.<sup>19</sup> If regulated operators link the design of their business model too closely linked to regulatory rules, prices may be deadlocked in the long-run. Furthermore, the elimination of regulation endangers the companies' means of existence.

Today's regulatory institutions always affect future regulation. By the time the characteristics of the monopolistic bottlenecks and network-specific market powers disappear within parts (or the in whole) network (e.g. due to technological advances), regulatory intervention may be obsolete.<sup>20</sup> Armstrong and Sappington (2006: 360) state in this context: "Consequently, although liberalization should ultimately lead to reduced regulatory oversight and control, more pronounced regulatory and antitrust oversight may be required on an interim basis to ensure that regulatory policy is tailored appropriately to the evolving level of competition and that competition is protected". The process of so-called "phasing out"<sup>21</sup> of sector-specific regulation may be delayed by regulator's self-interested behavior and its interest in on-going regulation.<sup>22</sup> It is fairly obvious that regulators are rarely interested in reducing their influence and cutting their own competences. Regulators have some bureaucratic self-interest and tend to act in their own interests and contrary to the intentions with which they were originally established.<sup>23</sup> Bonardi et al. (2006) argue that agency decisions can have important consequences for stakeholders (especially firms) and that agencies behave differently from elected political institutions. Regulators are generally appointed rather than elected. Therefore they do not face the election constraints that typically motivate elected politicians' behavior. Mueller (2003) and Wheelerby (1971) highlight that that regulatory agencies' objective functions are multidimensional: regulators tend to maximize their budgets, enlarge the number of employees or enhance career prospects and political reputations. Wilks and Bartle

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<sup>18</sup> Systemic risk refers to the risks imposed by interdependencies in a system or market, where the failure of a single unit or network of entities can cause a cascading failure.

<sup>19</sup> See Knieps (2007).

<sup>20</sup> See Knieps (2007:191).

<sup>21</sup> "Phasing Out": The period of time when the rationale for regulatory intervention is no longer tenable and the sector-specific regulation is likely to be abolished.

<sup>22</sup> See Knieps (1997).

<sup>23</sup> Actors react differently to external threats, constraints and opportunities because they differ in their intrinsic perceptions and preferences but also because these are shaped by the specific institutional setting within which they interact (Scharpf 1997: 37). Crozier (1964) interprets such a behavior as "the active tendency of human agent to take advantage, in any circumstances, of all available means to further his own privileges" (p.194).

(2002: 148) argue that the agencies were not expected to be extremely active in developing and implementing policies. However, the regulatory agencies have become more active than expected and have contributed to policies.

Another aspect of regulatory dynamics is regulatory risk. There are not only technological and systemic risks<sup>24</sup>, but also risks and uncertainties in relation to regulation and the socio-political goals of universal service. Oxera (2004) defines regulatory risk as “the risk that arises when the interaction of uncertainty and regulation changes the cost of financing the operations of the firm” (p. 16). Investment activities and thus the development of an efficient market are seriously constrained if these risks are unilaterally borne by some operators or even solely by the incumbent operators.<sup>25</sup>

The extent of regulatory risk is highly related to the modality regulators apply to the operators: Inconsistent decisions, new control mechanisms and the application of new regulations may result or lead to an increase in regulatory risk. Previous work on the issue with regard to the UK highlights that inconsistencies in the actions of regulators at price reviews may result in an increase of cost of capital.<sup>26</sup> Furthermore, regulatory risks may occur on different levels of regulatory activities. Knieps and Weiss (2008) for example state that as long as the competency to specify the areas and the instruments of sector specific regulation is delegated to regulators a clear and economically founded regulatory basis will not be applied. Following their example the market power regulation might be either oversized or undersized or even leave areas of network specific market unregulated. Another example they examine is that the application of price-cap regulation in a competitive section of markets may reduce economic risks but should be rejected because functioning market signals get disturbed.

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<sup>24</sup> Systemic risk refers to the risks imposed by interdependencies in a system or market, where the failure of a single unit or network of entities can cause a cascading failure.

<sup>25</sup> This is also highly related to the section on investment and technology..

<sup>26</sup> See Oxera (2004) and Bishop et al (1995).

**Table 1: Summary – Categories of Governance Costs**

Category	Key Assumption	Drivers	Components/ Indicators
<b>Direct costs of regulatory governance</b>			
<b>Monitoring Costs</b>	<i>Agents/Actors do not implicitly share the objectives of their principals and need to be monitored</i>	<ul style="list-style-type: none"> <li>• Agents behavior</li> <li>• Information Asymmetries</li> <li>• Accountability of Agents</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Budgets of Agents</li> <li>• Salaries and consultancy fees</li> <li>• Staff size</li> <li>• Number of active operators in public services</li> </ul>
<b>Compliance Costs</b>	<i>Operators face costs when they comply with regulatory directives</i>	<ul style="list-style-type: none"> <li>• Operators behavior/ Strategy</li> <li>• Relationships (formal/informal)</li> <li>• Modalities of information exchange</li> <li>• Distribution of Power</li> </ul>	<ul style="list-style-type: none"> <li>• Labor costs related to compliance activities</li> <li>• Administrative overhead</li> <li>• Adjustment to regulatory changes</li> <li>• Consultancy fees</li> </ul>
<b>Coordination Costs</b>	<i>There is more than one single actor involved in regulatory processes and their activities have to be coordinated</i>	<ul style="list-style-type: none"> <li>• Institutional design</li> <li>• Alignment of regulators</li> <li>• Regulatory processes</li> </ul>	<ul style="list-style-type: none"> <li>• Number of institutional actors involved in regulatory processes</li> <li>• Degree of independence of the regulator</li> <li>• Accountability of regulators</li> </ul>
<b>Indirect costs of regulatory governance</b>			
<b>Market and Prices</b>	<i>Actions of regulators (or policy makers) can have negative effects on the regulated industries and the consumers</i>	<ul style="list-style-type: none"> <li>• Sector specific characteristics</li> <li>• Regulators knowledge about the industries</li> <li>• Regulators economic knowledge/ expertise</li> </ul>	<ul style="list-style-type: none"> <li>• Regulatory tools to improve competition and sustainability of public services.</li> <li>• Evolution of product prices</li> </ul>
<b>Investment</b>	<i>Regulation may prevent the regulated operators from aligning their supply with the effective demand and needs an affect investment activities</i>	<ul style="list-style-type: none"> <li>• Sector specific characteristics</li> <li>• Incentives to invest in infrastructure for operators</li> <li>• Regulatory risk</li> </ul>	<ul style="list-style-type: none"> <li>• Degree of innovation in an industry</li> <li>• Market entry barriers</li> <li>• Access regimes/ Bottleneck regulation</li> </ul>
<b>Dynamics</b>	<i>Today's regulatory institutions always affect future regulation and regulators may behave self-interested.</i>	<ul style="list-style-type: none"> <li>• Regulators strategy</li> <li>• Periodical evaluation of regulatory governance</li> <li>• Definition of Universal Services</li> <li>• Institutional Powers (Who defines rules?)</li> <li>• Regulatory risk</li> </ul>	<ul style="list-style-type: none"> <li>• Regulator's power</li> <li>• Regulatory tools to improve competition and sustainability of public services.</li> <li>• Institutional changes in the regulatory frameworks and governance</li> </ul>

### **3. CHARACTERISTICS AND REGULATION OF THE POSTAL SECTOR**

The following section aims to introduce the properties of the postal sector. Before giving an overview about the characteristics and the rationale for regulation in the postal industry we briefly summarize the characteristics of the network industries in general.

#### **3.1 Comparison: Characteristics of Network industries and postal markets**

The infrastructure of network based industries is usually a collection of nodes connected by transport links. Network industries in general, are complex and dynamic and display particular characteristics which causes for some regulatory intervention. The main characteristics are:

- There are high irreversible and indivisible risks investments which will pay off only in the long term. The capital investments are typically (1) considerable, (2) upfront, (3) fixed, and (4) irreversible.
- There are always very few players (oligopoly), and consequently there is always some form of market power or former natural monopoly. Economies of scale are often pervasive because of the relatively high investment costs to install the infrastructure contrast with the low operational costs to provide a service once the network is installed.
- Technologies in the network industries are always somehow interdependent;
- There is often a need of coordination and for standards in order to afford interoperability between networks and operators.
- thus the fact that barriers to entry (and to exit for that matter) always exist (for a combination of the above reasons, i.e., market power, risks, and technology complementarity), and therefore
- There will always be asymmetry of information.
- There are generally significant and varying network externalities and public good characteristics.

The postal sector is not totally different from other fixed network industries. The most important similarities are the high economies of scale and scope. But, there are also significant differences. Crew and Kleindorfer (2000) state that the technologies differ because utility networks are physically connected while postal networks are more likely to be virtual networks.<sup>27</sup> Several other characteristics make the postal sector a unique network industry:

- **Technology**

The postal sector is less technology intensive than most network based industries, and technological innovations - which might help to address USO funding issues - are more scarce in postal services. This does not imply that there is no innovation. Postal innovation is rather related to processes such as sorting techniques or complementary services to postal products. However, in spite of rapid technological change the core services – transportation and delivery of postal items - remain largely the same.

- **Investment and employment**

Related to the fact that technological innovation is less than in other industries – e.g. the telecom or the energy sector - postal networks are very labour intensive. The installation of the postal infrastructure is thus not related to high investments and sunk costs. The costs are

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<sup>27</sup> See Bergmann et al. (1998) for the general characteristics of network industries.

mostly variable and occur anew (about 55%) in the sub-process of daily delivery.<sup>28</sup> Due to the decreasing average costs postal markets can be characterized as natural monopolies which are easily contestable because of the lack of long-term sunk costs.<sup>29</sup>

- Substitution

Unlike most other network industries the postal sector is rather shrinking than expanding. The demand for postal services is going to decline because of alternative means of communication and intermodal competition by telecommunication networks. Nevertheless, some segments of mail items - particularly advertising mail - were still growing in recent years. Even if most national postal operators are public owned enterprises the postal networks have almost always and will continue to compete with other logistic networks.

- Prices of postal services

Receivers of postal services do not have to pay in order to have access to the service. Postal rates are in almost every case paid by the sender. This is insofar noteworthy as not only the paying sender but also the receiver may be interested in the communication.<sup>30</sup>

Postal services are an important industry for both the economic as well as the social development of countries. Postal networks provide for the comprehensive collection and delivery of postal items (and sometimes payment services), thus including remote regions. Economic development is supported insofar as postal services provide for the exchange of information and goods at affordable prices.

Furthermore, the postal sector is a major industry in terms of sales and employment: Around 90 billion Euros, or 1% of the European GDP EU are realized in the sector and around 1.6 million workers are directly employed by the postal operators.<sup>31</sup> Another aspect is that there has been considerable involvement of governments because most postal services are or were state owned monopolies. Postal Operators were (and are in most European countries) traditionally state-owned enterprises, providing consolidated postal and telecommunication services. In the wake of the liberalization of telecommunication markets the two (completely different networks) were separated and transferred into autonomous companies. Liberalization in the postal sector (and in the other network industries) is accompanied by new institutional arrangements with sector-specific regulators.

In spite of the high diversity in the structure of postal markets across different countries, European postal markets share some market-related institutional characteristics.<sup>32</sup>

- (1) The incumbent postal operator is (or was formerly) a state owned enterprise.
- (2) The incumbent is monitored by a sector-specific regulator.
- (3) The incumbent post is the dominant operator (at least in the letter market).
- (4) The dominant incumbent is also subject to the competition authority, particularly concerning charges of abuse of the dominant position in the market.
- (5) The incumbent is subject to a form of price regulation (at least in the dominant or the reserved area).

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<sup>28</sup> In this respect they sink every single day anew. See Cremer (2004:8) on direct costs of the sub-process distribution.

<sup>29</sup> See Panzar/ Willig (1977) and Panzar (2008).

<sup>30</sup> See Jaag/ Trinkner (2008).

<sup>31</sup> See WIK (2006) and Ecorys (2008).

<sup>32</sup> See Panzar (2008).

- (6) Despite the increasing competition the incumbent faces an obligation to provide the universal service.
- (7) In spite of the dominant position the incumbent faces competition in some market segments.

These characteristics can't be observed clearly in all postal markets and there are certainly exceptions. Nevertheless they show how postal markets are structured and how they evolve in the wake of liberalization from a regulatory point of view.

### **3.2 The rationale and economics of postal regulation**

Postal markets (respectively postal operators) were historically isolated from anti-trust laws and regulatory intervention. They were not only state-owned but also integrated in ministries and therefore flush with regulatory bodies. This has changed radically with the corporate share of postal operators. They are nowadays subject to sector-specific as well as competition regulation. This occurs on the one hand because of ongoing liberalization and on the other hand because of the privatization of the operators in some countries. In this context the regulation of postal markets is subject to different sets of questions:

- (1) **Economic regulation:** Is the delivery of postal items a natural monopoly? What are the costs of the universal service? How do different regulatory models and instruments affect the market? other economic or rather technical questions arise in connection with the postal infrastructure: Are postal sorting facilities or the network of postal outlets monopolistic bottlenecks? Do postal operators have a dominant position in combination with the abuse market power in some market segments which should be disciplined by the anti-trust authority?
- (2) **Socio political regulation:** The achievement of socio political goals is concerned with questions related to the provision of universal services: What is the definition of universal service? Who fulfills the universal service and what is its price? Who bears its costs?

Against the background of the different areas of problems postal regulatory bodies are principally concerned with tasks related to the supervision of the universal service, the extent of monopoly and reserved services, the quality and the accessibility of services, issuing licenses and concessions, access to the established postal infrastructure and finally price regulation.

The provision of postal universal services has played a key role for the definition of all the European directives which aims simultaneously (1) to safeguard postal services as a universal service in the long run and (2) to increase competition. Concerning this universal service, the European directive 2008/6/EC provides that "member states shall ensure that users enjoy the right to a universal service involving the permanent provision of postal service of specified quality at all points in their territory affordable prices for all users." Furthermore the directive describes the minimum requirements of the Universal Services which includes clearance and delivery (minimum 5 days per week), the scope of products in the universal service (clearing, sorting, transport and distribution of postal items/parcels up to 2/10 kilograms).<sup>33</sup> With respect to the reserved areas the adoption of the Directive 2008/6/EC implies that full market opening of the postal markets has in general to be provided by 31 December 2010. Some countries

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<sup>33</sup> Cf. European Commission (2008).

(mainly new EU member states) are allowed to postpone the full market opening till the 31 December 2012.<sup>34</sup>

So far all European member states have some sort of regulatory authority which appears to be formally independent from postal operators, but in some cases the incumbent postal operator and the regulatory authority are still under control of a ministry. Ecorys (2008) notices that “both the regulatory frameworks and the mandate and resources of the regulatory authorities differ considerably from country to country, making it difficult to identify best practices....The developments in the regulatory (legal) framework have not always been driven by the regulatory authority in isolation, and may involve legal changes instigated by the state, and competition authorities (p.87).” Therefore, there are considerable difficulties to identify best practices for postal regulation.

A controversial issue concerning monopolistic bottlenecks is whether this type of facility exists in postal markets or not. From an economic perspective only the existence of bottleneck facilities would legitimate government intervention in form of access regulation for some elements of the existing postal infrastructure. Government regulation of access is not justified in the other parts of the network and regulation would constrain efficient negotiations of the involved parties.<sup>35</sup> It becomes evident that there are different opinions and interests – particularly in connection with access regulation regarding the economic nature of postal markets. The possibility to have access to the established postal network facilitates market entrance for potential new competitors. From an incumbent’s perspective negotiated access could bring advantages as well as drawbacks: individual parts of the infrastructure or processes could be better charged but this results in the (new) opportunity of a selective market entrance with the corresponding risk of cherry picking by competitors.<sup>36</sup> Knieps (2002) argues that there are no monopolistic bottleneck facilities in the primary processes (clearing, sorting and delivering mail items).<sup>37</sup> The European jurisdiction supports this proposition with its court ruling:<sup>38</sup> The European commission finally came to the same conclusion since there is no mandatory access regulation in the postal directive 2008/06/EC.

Even though there are no bottleneck facilities the daily delivery of mail items constitutes a natural monopoly. However, the necessary resources are not related to significant sunk (respectively fixed) costs; but they are rather scalable variable costs (such as labor costs) or disposable assets (e.g. vehicles or immovables).<sup>39</sup> The very labor intensive sub-process of delivery represents approximately 55 % of the costs of mail conveyance.<sup>40</sup> Thus the postal monopoly is a contestable monopoly and was successfully attacked in (partly) liberalized postal markets notably Sweden, Finland, Germany or the UK. As mentioned above, physical postal products are furthermore subject to potential substitutions through electronic communication and media (intermodal competition). In spite of the absence of monopolistic

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<sup>34</sup> In 2009 only five European countries do no longer have a reserved area: Sweden (since 1993), Finland (since 1991), UK (since 2006) and Germany (since 2008). The Netherlands abolished the reserved area of 50g in April 2009.

<sup>35</sup> See Knieps (2002).

<sup>36</sup> Cherry picking concerns the conveyance of cost-efficient mail items of business customers/ bulk mail in urban and dense regions.

<sup>37</sup> This view is also supported by several European studies, e.g. Ecorys (2005).

<sup>38</sup> The existence of monopolistic bottleneck facilities is in the early-morning newspaper delivery is negated in 1998 in the so called “Bronner”-case. Cf. Plaut Economics (2007) and Knieps (2007:166).

<sup>39</sup> See Knieps (2007: 116).

<sup>40</sup> See Nera (2004).

bottlenecks and the contestability of the monopoly the ex-post and ex-ante access regulation is not necessary in postal markets from a purely economic perspective.<sup>41</sup>

#### **4. APPLICATION: REGULATION AND INSTITUTIONS IN THE SWISS POSTAL MARKET**

The incumbent operator Swiss Post is set up as an autonomous public corporation, wholly owned by the Swiss Confederation. The transformation into an incorporated company under special law is currently discussed within the revision of the Swiss postal legislation. Swiss Post operates within the institutional limits laid down by the federal legislation. The Government not only determines the scope of postal products and services and prices of universal services, but also defines the strategic objectives of Swiss Post every four years. Since Switzerland is not a member of the EU, it is not obliged to implement the directives of the European Commission. However, it considers a similar timing and follows the European philosophy of liberalization. The current law reform is to ensure Universal Service as well as to promote competition. The parcel market has been fully liberalized in 2004. An intermediate step of market opening was implemented in the form of a reduction of the reserved area down to 50g on from July 2009 onwards.<sup>42</sup> Depending on the further course of the revision, the full liberalization of the Swiss postal market is not to be expected before the end of 2011.

##### **4.1 Institutional Setting and Actors in the Swiss Postal Market**

In Switzerland the central regulatory authority for the postal sector is the postal service regulation authority (PostReg). Other actors are the Competition Commission (ComCo) and the price supervisor which are both functionally independent but organizationally accountable to the government. As the State is the formal owner of the incumbent postal operator Swiss Post, the Federal Council is involved with the financial control of the incumbent and responsible for the appropriation of its profits. The responsible ministry for the postal sector is the Federal Department for Environment, Transport, Energy and Communication (DETEC).<sup>43</sup>

- The sector specific regulator (PostReg) is functionally independent but organizationally attached to the DETEC<sup>44,45</sup> The Department is simultaneously

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<sup>41</sup> See de Bijl et al. (2006) for a discussion on access regulation in the postal sector. They conclude: "Our finding that there are no monopolistic bottlenecks in the delivery chain implies that the essential facility doctrine cannot be used to impose downstream access obligations upon the dominant postal operator."

<sup>42</sup> From July 2009 the reserved area contains addressed domestic and inbound letters up to a weight of 50 g. Non-reserved universal services are addressed letters (domestic and inbound) heavier than 50 g, parcels up to 20 kilo and all outbound letters.

<sup>43</sup> Other at least partially involved ministries are the Department of Finance (FDF) in its function as part owner of the incumbent and the Department of Economic Affairs (FDEA) which is the governmental principal of the competition commission and the price supervisor.

<sup>44</sup> The authority monitors the Swiss postal market and ensures the provision of universal services, in terms of high quality and at affordable prices. It deals with complaints by the public relating to universal services and ensures a fair and functioning competition in the postal market (for instance by controlling the operators' compliance with sector-specific labor conditions or the prohibition of cross-subsidization). In addition the authority provides policy advice for the DETEC.

<sup>45</sup> The European Postal Directive requests a complete separation between the regulators and the regulated company.

responsible for the Swiss Confederation's owner interests and for the sector-specific regulator PostReg.<sup>46</sup>

- The ComCo is a group of 12 experts from different disciplines in charge of competition regulation in the classical sense (ex-post regulatory intervention in anti-trust and abuse of dominant position matters).<sup>47</sup>
- As mentioned above Switzerland established the function of the so-called price supervisor (Mr. Price), who has the power to sanction prices in the public sector as well as among firms with significant market power in an ex-ante manner.

## 4.2 Regulatory governance costs in Switzerland

In the following we give an overview about where and how the different costs of regulatory governance in the Swiss Postal Market occur.

### 4.2.1 Direct costs of postal regulation

As mentioned in section 2.1 the direct costs of regulatory governance occur due to the institutional design and depend on the relationships and the separation of competences of the involved institutional actors.

#### Monitoring costs

As a specialized department for postal matters, representative of the owners' interests and as principal of the sector-specific regulator the DETEC holds different positions. On the one hand it prepares (in consultation with the FDF) the Federal Council's decisions concerning the achievement of the strategic goals of the incumbent. Simultaneously PostReg is administratively attached to the DETEC, the same department that holds the administrative lead in the postal legislation reform. In 2006 the OECD has published a report, in which Switzerland was criticized for its quite unusual approach in regulatory matters in most infrastructure sectors, even though the function of the Price Supervisor was not studied in detail.<sup>48</sup> While Switzerland generally follows the EU Directives in substantive matters, it does not do so in institutional matters so far.

In the course of the legislative process PostReg is interested in expanding its regulatory responsibilities and the competences in monitoring to sanction the operator(s). It is evident that the regulator tries to influence the process and to stipulate its concerns in the new postal law. As part of the consultation process PostReg already commented on the draft law and on the intention to transform Postreg in a PostCom. The regulator's comment requests for (1) broader authority, (2) access regulation, (3) price cap regulation and (4) a clear competence in the price setting process. The latter concern is supported by operators, since this may lead to a reduction of coordination costs mentioned in the section below.<sup>49</sup>

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<sup>46</sup> See. WIK (2005: 11). But, some substantial regulatory responsibilities concerning price regulation outside the reserved area are subject to the price supervisor which acts in complete independence from the DETEC and the Federal Council.

<sup>47</sup> The commission's main tasks are the elimination of harmful cartels, monitoring dominant or monopolistic companies for signs of anti-competitive behavior, enforcing merger control legislation and preventing the imposition of restraints of competition by the state.

<sup>48</sup> See OECD (2006). The OECD report highlights, among others, "the absence of a coherent framework for the regulatory authorities" (p.69), which means that "Switzerland currently only is at an early stage of really independent sectoral regulators" (p.70), to conclude that the "evolution of regulation in the network industries has been slower in Switzerland than in the European countries" (p.139). It also criticizes the lack of independence of sector specific regulators when it comes to sector specific regulation.

<sup>49</sup> See PostReg (2008).

## Coordination costs

As mentioned in Section 2, postal markets (respectively postal operators) were historically isolated from anti-trust laws and regulatory intervention. In the beginning the DETEC, the competition commission and the price supervisor were concerned with regulatory issues in the Swiss postal market. In 2000 the price supervisor paid attention to postal tariffs for the first time since the postal reform in 1998. The new sector-specific regulator PostReg was set up simultaneously with the implementation of the new postal ordinance in 2004. This institutional rearrangement not only increased the number of involved regulators, but the particular interests of the various regulatory authorities in the postal market increased also continuously. The non-specific regulators are increasingly active and tend to expand the competences in the former monopolistic postal market. Except for the verification of compliance with the prohibition of cross-subsidizing, the current regulatory framework does not give any competences in relation with the surveillance of competition to the sector-specific regulator. Issues concerning potential abuse of market power of the incumbent are subject to the ComCo. In the course of the legislative process PostReg tries to expand its responsibilities and competences to impose sanctions related to the surveillance of competition.<sup>50</sup> The incumbent postal operator currently criticizes the lack of legal certainty regarding PostReg's competences and enforcement capacity. In the meantime the parties bargained and accepted a modus vivendi for the interim period until the new law will be enacted.

The price supervisor is increasingly interested in postal in the non-reserved area (postal items heavier than 50g). In the reserved area where prices are verified and finally set by the DETEC (following the recommendation of PostReg), the price supervisor has a right to give a recommendation but no power to enforce it autonomously. In this context it is worth mentioning that the various regulatory bodies involved and the Federal Council (in its role of owner) have different criteria to assess profits and hence the prices of the incumbent:

- Price Supervisor: Due to the incumbent's current profit situation (909/825 million CHF in 2008/2009) the price supervisor examined whether Swiss Post realizes inadequate profits. He argues that current postal tariffs are too high and that earnings should be redistributed to the citizens in form of tariff reductions.<sup>51</sup>
- PostReg: The Regulator is less interested in the incumbent's profit situation, but rather interested in the cost structure behind the prices. As long as there is no reasonable suspicion regarding an abuse of market power.
- Government: As the owner and the strategic principal the state profits largely of a well performing incumbent.<sup>52</sup>
- Competition Commission: The ComCo is unlikely to be interested in the profits of the postal incumbent. However, ComCo became active in the postal sector in the end of 2008 as Swiss Post announced various acquisitions in the field of early newspaper delivery and a potential abuse of market power was suspected.<sup>53</sup>

Nevertheless, considering the coordination of regulators the mentioned OECD report highlights a coordination deficit between sector specific regulation and transversal regulation (e.g., competition regulation and price regulation).

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<sup>50</sup> See PostReg (2008).

<sup>51</sup> In March 2009 the Price Supervisor reached an agreement with Swiss Post: Swiss Post lowers some of its letter prices (especially large letters) and simplifies its range as of 1 July 2009. The intended adjustment of parcel prices and prices for international consignments, originally planned for April 2009, got deferred for a year.

<sup>52</sup> For the first time, in 2007 (accounting year) Swiss post was able to realize a profit which allowed for a payout of 300 million CHF (200 millions in 2008) to the Swiss Confederation.

<sup>53</sup> See below.

## **Compliance costs**

As a result of the profit situation of the incumbent in recent years and due to the fact that there is a certain market power the price supervisor conducts extensive assessments of postal tariffs.<sup>54</sup> The increasing involvement of different regulators also implies higher liabilities of operators regarding the provision of information. Furthermore, as different regulators apply different methods and have different perceptions when they analyze postal matters, the operators have to learn and understand more about the different methods which finally results in increasing compliance costs.

In addition to the reporting to the Federal Council (based on article 42 of the Swiss Postal Ordinance) the incumbent is obliged to hand in a comprehensive report about the compliance with the postal legislation to PostReg. The reporting requirements include the following issues:

- density and evolution of the postal network
- costs of the universal services and the postal network
- an outline of services classified as reserved, non reserved and services under competition
- costs and revenues of the different services (reserved, non reserved, competition) as well as the applied transfer prices and cost allocations
- results of the independent quality inspection concerning the quality of universal service and customer satisfaction
- intentions of development and changes in the universal service
- development of employment

In its annual report PostReg evaluates, whether the postal incumbent correctly discloses the financial regulatory statement, if the incumbent comply with the rules concerning prohibition of cross-subsidization and if the quality requirements have been fulfilled.

### **4.2.2 Indirect cost of regulation in postal markets**

As noted above the indirect costs of regulation are somehow related to the direct costs, but they are rather the outcomes and effects of regulation in the market. They are particularly in relationship with the allocation of competences and the instruments implemented to regulate.<sup>55</sup>

## **Market and prices**

Prices in the Swiss letter market are relatively stable. The last increase in prices took place in 2004 and a planned markup was postponed until April 2010 due to an agreement with the Price Supervisor. Since 2004 the price of a single piece priority letter has been 1 CHF. The expectation of falling prices in the postal market is always mentioned as an argument for the full liberalization of the postal sector. But actually the pieces will not be lower, at least not for private customers, because about 85% of the revenue is made with business and bulk mail. As mentioned above a rigid regulation of prices causes that no new and innovative pricing models are established by the operator. In Switzerland prices in the reserved area are set by DETEC. So far universal service is funded by the residual monopoly. An open question associated with indirect costs of regulation and the continuing liberalization is: Which is the appropriate and efficient mechanism to finance the universal service? There is only little

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<sup>54</sup> See the section about coordination cost in the Swiss postal market.

<sup>55</sup> See Jaag (2007) to read more about costs of regulation in relation with universal service.

experience in Europe on how the different funding solutions affect the development of the mail market in general and the universal service in particular.<sup>56</sup>

The incumbent is expanding its operations in the early newspaper delivery. This is done mainly through the acquisition of established delivery organizations of the large publishers in the midland. There is a certain risk that a large manufacturer builds a natural monopoly and gains considerable market power.<sup>57</sup> But, one has also to consider whether a duplication of logistic networks in the night and early morning hours is economically reasonable and efficient. Furthermore, the horizontal integration of early delivery organizations facilitates the achievement substantial economies of scale. The willingness of publishers to sell the vertical integrated early delivery organizations (which are actually far away from their traditional core business) shows that they assume that the early delivery can be operated more efficiently.<sup>58</sup> The Competition Commission therefore evaluated both situations and decides which consequences they are willing to accept. If they do not approve the acquisition, economies of scale are difficult or quite impossible to achieve in the early newspaper delivery. But it will lead to a concentration of suppliers if they allow for the merger. Both solutions have different impacts on the further development of the market.<sup>59</sup>

### **Investments (and technology)**

Switzerland maintains one of the densest postal outlet networks in the world. Even in a fully liberalized market in it is a commercial interest of the incumbent, to have a modern and nationwide postal network to provide adequate and cost efficient services. Therefore, it is debatable whether a legally regulated infrastructure contract is needed and whether this leads to an efficient provision of postal services. Even though the definition of the accessibility of postal access points delivers a certain value added for residential customers, future-oriented and innovative solutions with focus on the changing customer needs and technological developments get partially disabled through too rigid definitions. Examples of modern solutions are postal agency operated by third parties, a definition of the Universal Service that allows for electronic delivery of postal items (which allows for flexibility in physical delivery frequencies). Agencies operated by third parties have much longer opening times than traditional post offices which is in line with changing customer needs. Whether the design of the postal network is advantageous to the citizens depends more than ever not only on geographical accessibility, but also whether the offered portfolio of products and services is in accordance with changing customer needs.

In recent years the incumbent has been heavily investing in its sorting facilities. The investment in three new sorting facilities and the centralization of the sorting process Swiss Post allows for long term savings of about 150 million Swiss francs annually. Furthermore, the reorganization results in substantial efficiency gains in the provision of postal services. If access conditions and prices to the postal infrastructure are fixed by law in an ex-ante manner,

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<sup>56</sup> Deutsche Post DHL, for example, provides the universal service although they are not legally obliged to render it. In France La Poste is obligated by law to provide the universal service and it is fully financed by reserved area. In case of a full liberalization of the French postal market a kind of fund solution is planned, but its concrete design has not been defined yet. Today, La Poste gets compensated for the operation of the nationwide post office network. See Oxera (2006) for a detailed description of different financing mechanisms for the postal universal service.

<sup>57</sup> However, a natural monopoly in the early delivery business is even easier contestable than in the natural monopoly in the traditional daily mail delivery: sorting costs are much lower and the costs occur in the sub-processes of transport and delivery.

<sup>58</sup> Knieps (2007) states that the implementation of separate home delivery systems by different publishers and operators constitutes an inefficient duplication of costs.

<sup>59</sup> The competition commission finally approved the acquisition in autumn 2009.

this may cause negative impacts on the amortization of the sorting devices. Moreover, it prevents the development of new pricing solutions in form of the negotiation between the incumbents and market entrants.<sup>60</sup>

### **Regulatory dynamics**

So far it is difficult to evaluate how regulatory dynamics affect the evolution of the market. The example of the Swiss postal law reform shows clearly that the sector-specific regulator is trying to influence the formation of regulatory institutions, and hence the evolution of the regulatory environment. Due to the pursuit of broader powers to direct, legal access regulation, price cap regulation and a clear assignment in the pricing process, the regulator seeks to defend its own interests and tries to enhance its institutional legitimacy. There is a risk of over-regulation, and that the development of the market rather inhibited than stimulated.<sup>61</sup> Against this background it is of seminal interest that no unnecessary requirements will be written down and fixed in new postal laws: regulation should not hinder the market's development but rather facilitate the phasing-out of regulation after a successful liberalization.

Since there is not much experience about regulatory dynamics in the Swiss postal sector we briefly examine an example from the UK. In Britain the postal market was opened fully on 1 January 2006. The universal service essentially remained as it was before (meaning it is subject to more stringent requirements than stipulated in the EU Directive) and the regulatory body PostComm was assigned new, extensive competencies. The British postal market is thus one of the most strictly regulated in Europe and its universal service provider the Royal Mail is the postal service with the biggest financial difficulties in Europe. The network of postal outlets was outsourced to Post Office Ltd. many years before. It is operated by franchisees and runs a deficit despite the fact that it receives state subsidies and offers no payment services. The British regulator Postcomm enforced a de facto regulation of access to Royal Mail's network. This regulatory intervention lead to very low access prices. As a result downstream competition is less intensive than in other liberalized postal markets - there are hardly any new competitors across all stages of the postal value chain. Instead, the trend in consolidation (collection and sorting) is growing faster than in other European markets. Mail items are handed over to Royal Mail's network for delivery at low prices. This kind of access regulation strengthens the delivery organization and thus the position of Royal Mail in the market. The example shows that the original interventions may cause a follow-up regulatory intervention.

## **5. CONCLUSIONS**

In the theoretical chapter we outline the framework of regulatory governance costs. The literature on regulation in network industries is to a large extent concerned with positive effects of regulation in the context of market failure. In this article we focus heavily on potential negative effects of regulation. It notes that regulation has not always the desired effects in line with the originally defined goals. Regulation is notably beneficial if it is

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<sup>60</sup> The Swiss experience in the parcel market shows that in the course of the full market liberalization in 2004, suppliers were able to negotiate the mutual use of infrastructure on a commercial basis. In 2006 Swiss Post implemented a basic agreement with private postal service providers which defines the mutual access to the infrastructure. Based on this contract Swiss Post and DHL negotiated in the access conditions to the incumbent's PO box facilities in summer 2008.

<sup>61</sup> See Knieps/ Weiss (2008).

reasonable due to the economic characteristics of an industry.<sup>62</sup> This is particularly the case in the postal sector when it comes to the achievement of socio-political objectives, thus ensuring the provision of the universal services. It is debatable - since sector-specific regulation is not necessarily economically reasonable - whether these tasks should be performed by a national sector-specific regulator or by a governmental authority with sufficient supervisory functions involved in postal matters. However, it is important to ensure that no unnecessary regulatory requirements are stipulated in the law. The prescribed regulatory framework should remain rather lean than exaggerated and should be evaluated on a regular basis. Regulatory institutions in network industries have got to be built in a manner that not only market structures adjust to regulation but also regulatory interventions adapt dynamically if the developments of markets require an adjustment.<sup>63</sup>

Even if the cost of regulation are not quantified and operationalized in the article, the mentioned examples in the sections about direct and indirect costs of regulation show how such costs could have an effect on the development of markets. The remarks concerning monitoring and coordination costs imply that the Swiss institutional structure is suboptimal: relatively high transaction costs occur between the Government and the regulatory authorities as well as among the different regulators. The example of the recent developments in the Swiss market for early newspaper delivery shows that ex-post supervision by the Competition Commission may suffice to assure efficient outcomes in the postal sector. There is no uniform regulatory system established in European postal markets and considerable heterogeneity in the design of the regulatory authorities and the definition of universal services in the EU. Regarding the economic characteristics of postal markets it cannot be ruled out that the traditional competition regulators might have enough skills and competences available to engage in efficient regulatory interventions in the postal sector. Hence, there may be no need for sector-specific regulation in the postal sector – at least with respect to market power regulation.

It can be observed in regulated industries in general that different regulators are trying to enhance their power and to expand their responsibilities. The analysis of the Swiss postal market shows that there exists a dynamic interaction between direct and indirect costs of regulation. Therefore, the institutional framework also affects the efficiency of markets and network industries in a positive or negative manner.

With our approach to the assessment of regulatory governance costs, we would like to contribute to a better understanding of the consequences of regulation and the role and influence of the regulatory authorities in network industries. The insights about the costs and its impact on market evolution will be useful to analyze regulatory policies in postal markets as well as in other network industries (certainly with respect to the characteristics of the different industries). A comparison of direct and indirect costs of regulation in different markets can help to determine how regulatory institutions and frameworks can be designed to simultaneously promote competition and to pursue the objectives of the public service. Especially interesting is the occurrence of indirect costs. These costs occur mainly in combination with unclear regulatory ruling ending in juridical proceedings, too rigid regulatory regimes that hinder the development of markets or unforeseen consequences of regulation.

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<sup>62</sup> See Jaag and Trinkner (2010).

<sup>63</sup> See Finger et al. (2005).

A particular weakness of our study is that we so far just rely on secondary data and observations. After the preliminary study it is therefore planned to conduct empirical qualitative research to learn more about regulatory governance costs and to improve the framework. An investigation on how the different costs (including direct as well as indirect costs of) are perceived in practice by different actors involved with regulation. Future research should therefore investigate how regulatory governance costs develop and change in different network industries. The overall goal of further research is to develop a generic framework which enables the comparison of regulatory principles and thus the deduction of best practices to give recommendations for the design of effective and efficient regulatory regimes.

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