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Abstract

The corporate governance structure of monasteries is analyzed to derive new insights into solving agency problems of modern corporations. In the long history of monasteries, some abbots and monks lined their own pockets and monasteries were undisciplined. Monasteries developed special systems to check these excesses and therefore were able to survive for centuries. These features are studied from an economic perspective. Benedictine monasteries in Baden-Württemberg, Bavaria and German speaking Switzerland have an average lifetime of almost 500 years and only a quarter of them broke up as a result of agency problems. We argue that this is due to an appropriate governance structure, relying strongly on the intrinsic motivation of the members and on internal control mechanisms.

JEL-Classification: D73, G3, L14, Z12

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WHY ARE MONASTERIES OF INTEREST FOR MANAGEMENT?

The corporate sector has been plagued by huge scandals related to excessive manager compensation and fraudulent bookkeeping. Agency theory – the dominant theoretical approach within the corporate governance literature – derives its strength from being able to predict how people change their behavior in response to changes in incentives. The theory suggests that external control mechanisms will act on behalf of absentee firm owners by linking the interest of the owners with the interest of the CEOs and thus preventing such scandals (Fama and Jensen 1983; Jensen and Meckling 1976; Jensen and Murphy 1990a; Jensen and Murphy 1990b). While agency theory provides powerful theoretical tools for predicting the effects of changes in incentives, at the same time, however, the theory tend to constrain their attention to a narrow and empirically questionable view of human motivation, the classical *homo oeconomicus* (see Frey 1999). This paper intends to show that this narrow view of human motivation may severely limit progress in understanding incentives and that it is useful to learn how institutions beyond corporations – in our case monasteries – undertake their governance.

In fact, for corporations many of the suggested external incentives have led to new problems (Bebchuk and Fried 2004; Jensen et al. 2004; Stefani 2008). Performance-related executive compensation has contributed significantly to a lack of transparency in pay policy and in some cases even to a loss of control through manipulation of incentives (Aboody and Kasznik 2000; Efendi et al. 2006; Johnson et al. 2006; Yermack 1997). The draconian sanctions of the Sarbanes-Oxley Act are bound to lead to an explosion in costs without slowing the explosion in salaries and fraudulent bookkeeping (Romano 2005). According to the majority of findings, independent boards have not prevented the fact that managers can expropriate shareholders by also entrenching themselves (Boyd 1994; Conyon and Peck 1998; Core et al. 1999; David et al. 1998; Lambert et al. 1993; Main 1991; Westphal and Zajac 1994). These weaknesses of actual corporate governance practice suggest that it might be useful to approach these issues from alternate perspectives (Benz and Frey 2007). Recent literature suggests that external discipline should be complemented by internal behavioral incentives (Davis et al. 1997; Frey and Osterloh 2002; Frey and Osterloh 2006; Osterloh and Frey 2005; Reberlioux 2007; Sundaramurthy and Lewis 2003; Wiseman and Gomez-Mejia 1998). Internal behavioral incentives like the desire to

reciprocate or the desire to avoid social disapproval, also shape human behaviour. By neglecting these motives authors may fail to understand the levels and the changes in behaviour. Moreover, internal behavioral incentives interact in important ways with external control mechanisms. As a consequence economists may even fail to understand the effect of external control on behaviour if they neglect internal behavioral incentives. In particular, psychological economics (for an overview see Frey and Benz 2004), motivation psychology (for an overview see Deci and Ryan 2000), embeddedness theory (Baker 1990; Granovetter 1985) or prospect theory (Kahneman and Tversky 1979) show that because of the existence of internal behavioral incentives, external control may backfire and reduce the agents' performance or compliance with rules.

The following four aspects are of major importance:

Firstly, agency theory argues that CEO duality weakens corporate governance by reducing the effectiveness of board monitoring (Finkelstein & D'Aveni, 1994). Building on motivation psychology, advocates of stewardship theory suggest that the joint structure provides unified firm leadership and removes internal or external ambiguity regarding who is responsible for firm processes and outcomes (Anderson & Anthony, 1986; Donaldson, 1990; Lipton & Lorsch, 1993). Harris & Helfat (1998: 906) document that "In sum, out of 13 studies, 10 find either positive or no effects of duality on firm performance". Furthermore, studies empirically support that CEO duality does not promote CEO entrenchment, since it is negatively related to executive compensations (Westphal & Zajac, 1994; Conyon & Peck, 1998).

Secondly, standard agency theory advises that shareholders tie performance to managers' pay to ensure that managers take optimal actions (Jensen and Meckling 1976). The behavioral agency model (Gomez-Mejia and Wiseman 1997), combining elements of agency theory with behavioral views of decision making under uncertainty, raises questions about the effectiveness of stock option compensation to uniformly encourage managerial risk seeking. Larraza-Kintana et al. (2007) would seem to support the negative association between CEO stock options and CEO risk taking. Relying on psychological economics, Frey & Osterloh (2005) suggest a return to substantially more fixed payments for management activity, since variable pay induces people to work for their own benefit rather than the team's output and contributes to the selection of self-serving individuals.

Thirdly, agency theory recommends independent directors. They should take their monitoring role seriously and protect shareholders as owners of the firm (Bebchuk and Fried 2004; Bebchuk et al. 2006; Fleischer et al. 1988). However, most researchers found that a higher number of outside directors increase executive pay (Boyd 1994; Conyon and Peck 1998; Core et al. 1999; David et al. 1998; Lambert et al. 1993; Main 1991; Westphal and Zajac 1994). Some authors argue that, due to the higher number of personal contacts, insiders or embedded outsiders can control each other and the management more effectively (Baysinger & Hoskisson, 1990; Baysinger *et al.*, 1991). Personal relations foster the creation of trust and prevent fraud (Granovetter 1985).

Lastly, agency theory strongly supports the conclusion that shareholder wealth maximization should be the definitive criterion for corporate governance in stock corporations (Murphy 1999; Wiseman and Gomez-Mejia 1998). Building on psychological economics, Benz & Frey (2007) argue that democratic participation rights are a central element of political constitutions, permitting voters to set in place policies closer to their preferences and thereby reducing the principal-agent problem. Osterloh & Frey (2006) propose the inclusion of knowledge workers' representatives on the board for more effective monitoring. Firms gain their competitive advantage through firm-specific knowledge rather than physical investments (Asher et al. 2005; Grandori 2005).

While adding to our understanding of internal behavioral incentives, the efficiency of internal control mechanisms has been little studied in the corporate governance literature, since compelling empirical evidence is still rare. The control mechanisms presently used to govern modern stock corporations are strongly reminiscent of Adam Smith's 'invisible hand' theory, in which buyers, i.e. shareholders, sellers, CEOs or employees, are free to move silently through the market, constantly creating and destroying relationships. With this approach, economic actors act outside a social context and therefore react almost slavishly to external incentives (Granovetter 1985). Such governance does not include internal arrangements, such as 'voice' (Hirschman 1970), expressed as democratic participation rights. It also does not consider loyalty and trust (Granovetter 1985; Hirschman 1970), expressed in the protection of firm-specific investments, or in the image of the CEO as the steward of the firm, or in the belief that rare managerial talents will make efforts for a fixed compensation. However, internal arrangements can guard against trouble and facilitate better control (Baker 1990;

Granovetter 1985; Lubatkin et al. 2007; Uzzi 1996). In this paper we will discuss the efficiency of internal control mechanisms by empirically analyzing how Benedictine monasteries have approached their specific corporate governance problems.

Studying the corporate governance of monasteries offers the following advantages: Firstly, monasteries were, and still are, confronted with similar principal agency problems to stock corporations: A core problem is that individuals occupying leading positions tend to accumulate uncontrolled discretion. However, monasteries address agency problems differently from stock corporations. Monastic leaders are disciplined either through members exerting their participation rights, or through internal control mechanisms, like the development of value systems and special supervisory concepts. Secondly, monasteries are experts in internal control mechanisms: their organizational members are committed to one institution for their entire lives. Limited exit-options are compensated by more 'voice'. When members perceive a decrease in the quality of their organization, they have the possibility of improving the situation. Furthermore, there are hardly any institutions which have implemented and tested normative systems to this degree. Thirdly, Benedictine monasteries, with over 1000 years' history, have more experience in solving agency problems than stock corporations. They offer an extensive set of tools, tested in practice over several centuries, for exploring the theories mentioned above.

We use a dataset of all Benedictine abbeys¹ in Bavaria, Baden-Württemberg and German-speaking Switzerland, and analyze their corporate governance mechanisms in detail. The following questions are addressed: Are monasteries capable of solving agency problems? If so, how are they doing this, and what are the insights for other organizational forms? Our analysis seeks to contribute to the corporate governance literature by providing a set of empirical results to understand the efficiency of internal behavioral incentives and their combination with external control mechanisms. The Benedictine Monasteries are analyzed from an economic perspective, enhanced by psychological and behavioral aspects. The theoretical foundations are principal agency theory, psychological and

¹ This analysis refers to Benedictine abbeys, which are autonomous monasteries within the Benedictine Order. Where no concrete abbeys are mentioned, we use the more common term monastery. This term is broader and also includes affiliated houses.

political economics, as well as embeddedness theory. This constitutes a new approach for analyzing monasteries.

ARE MONASTERIES CAPABLE OF SOLVING AGENCY PROBLEMS?

When asking what stock corporations can learn from Benedictine monasteries, the aim is not to compare and appraise the two institutions as a whole. Stock corporations are for-profit organizations, i.e. economic communities, while monasteries are non-profit organizations, i.e. life partnerships. The objectives of the two organizational forms differ fundamentally. The main objective in stock corporations is financial value added. The main objective in monasteries is to operate as a steward of god (Galbraith and Galbraith 2004; Regula Benedicti 2006). In monasteries, economic success is not an aim in itself, but a precondition for the search and glorification of god (Benediktinerkongregation 1986). The product, capital and personal markets developed in altogether different ways². Despite these obvious differences, they have many similar problems in common, making it possible to fruitfully learn from each other.

Agency problems in stock corporations and monasteries

Both organizations have the core problem that persons occupying leading positions tend to exercise uncontrolled discretion (Berle and Means 1932). In stock corporations, managers can expropriate shareholders by entrenching themselves in their positions and staying on the job, even if they are no longer competent or qualified to run the firm (Shleifer and Vishny 1989). Poor managers who resist being replaced may be the most costly manifestation of the agency problem (Jensen and Ruback 1983). Managerial opportunism, whether in the form of expropriation of investors or of misallocation of company funds, reduces the amount of resources that investors are willing to put up ex ante to finance the firm (Williamson 1985). In monasteries, there is no possibility of distributing the wealth

² For an analysis, the emerging field of religious economics is a good starting position (e.g. Azzi and Ehrenberg 1975; Held et al. 2007; Iannacone 1992, 1997, 1998; McCleary and Barro 2006; Miller 2002; Stark and Finke 2000a). There are also a few related economic papers about the Catholic Church or even the monastic organizations (e.g. Ekelund et al. 1996; Ferrero 2002; Padovano and Wintrobe 2008; Salmon 2007; Schmidtchen and Mayer 1997; Stark and Finke 2000b).

(Hansmann 1980), but there is a strong incentive to make life as luxurious and enjoyable as possible. In the long history of monasteries, it was not uncommon for abbots and even entire monasteries to live a life of luxury (Helvetia Sacra 1986; Kieser 1987). The next section empirically investigates whether monasteries succeeded in developing efficient corporate governance mechanisms against bad abbots and their exercise of uncontrolled discretion.

Empirical analysis: Did monasteries solve their agency problems?

An important function of corporate governance is to control and discipline management (Daily et al. 2003). The same goal is shared by the Holy See and the umbrella organizations of the religious orders, where disciplining abbots and their convents is a central task (Schmidtchen and Mayer 1997). There are at least two indicators of good corporate governance common to firms and monasteries: the survival rate and the reasons for liquidation. A long average lifetime, coupled with minimal control problems, indicates crisis-proof, effective corporate governance mechanisms.

In order to analyze the survival rate of monasteries and the reasons for liquidation, we have collected data on all the Benedictine abbeys³ that ever existed in Baden-Württemberg, Bavaria and German speaking Switzerland. The sample covers a total of 133 monasteries: 18 in Switzerland, 35 in Baden-Württemberg and 80 in Bavaria (cf. appendix 1). The empirical examination is limited to Benedictines and one common language, since the governance of monasteries varies between the different religious orders, regions and cultural areas. Benedictines are one of the largest orders and have greatly influenced the development of western economics and work ethics (Faust 1997; Kieser 1987). Data for this analysis were obtained from historical chronicles (Germania Benedictina 1970, 1975, 1999; Helvetia Sacra 1986) and the Website of the house of Bavarian history (http://www.datenmatrix.de/projekte/hdbg/kloster/index_extern.shtml).

Figure 1 shows the average lifetime of the monasteries in our sample. The first monasteries were established at the beginning of the 8th century. As of 2008, the 133 monasteries have an average lifetime of 604 years (cf. appendix 2).

³ We didn't consider the Benedictine communities of women religious, because they have different governance structures.

Figure 1 about here

We have modified the average lifetime in three ways. Firstly, the period before 1000AD is ignored because a specific Benedictine monasticism had not evolved until then (Helvetia Sacra 1986) . Secondly, temporary closures are excluded because a monastic community can survive for years without actually having a monastery building: the Thirty Years' War, the Helvetik in Switzerland and the Third Reich are prominent examples. Thirdly, abbeys, which were completely closed and then reopened, are counted as separate organizations. With these modifications, the lifespan is reduced to 463 years, while the number of monasteries is increased to 150 (cf. appendix 3). This is a first indication of efficient corporate governance in Benedictine monasteries.

Table 1 analyzes the reasons for closures. The table lists 119 institutions after the year 1000AD, and disregards temporary closures, which implies 150 foundations. 17% of the monasteries were never closed down; these institutions still exist today. 4% of the monasteries were voluntarily closed. A large proportion of all monasteries, 53%, broke up due to institutional factors. These monasteries fell victim to secularization or were violently closed during the Reformation. Beside these outstanding events, a revolt of the peasants or the plague could also lead to break ups and forced shutdowns. Endogenous factors, e.g. excessive wealth during secularization, or a loss of reputation during the Reformation, might have influenced the political climate against the monasteries and thus contributed to the closures. In the end, the monastic institutions and their members had little or no influence on the outcome of these incidents. Closures occurred regardless of how good the monastic management was. Hence we simply speak of external institutional factors. The massive influence of these forces is also visible in Figure 2, which shows the number of existing monasteries and collegiate churches over time. It can be seen that the Benedictines never recovered from the Reformation in the 16th century and Secularization in the 19th century. In the 20th century, the number of monasteries was slowly on the rise again.

Table 1 about here

Focusing on agency problems, 13% of the monasteries broke up due to mismanagement, including lack of discipline, insolvency or recruitment problems. An analysis of the particular monasteries shows that the breakups were mainly due to a combination of all three factors. 7% disappeared due to control failures, including hostile takeovers. The changes in governance structures are revealing: 6% of the monasteries studied changed into collegiate churches. To a large extent, these changes indicate the monastic leaders' desire for wealth, since collegiate churches permit private ownership and further liberties. As shown in Figure 2, governance changes were most prominent when the monasteries were economically weak and discipline failed, such as occurred during the wars of the 10th century and the Reformation Period. As further shown in Table 1, monasteries unable to survive due to agency problems (40 monasteries or 26%) have a shorter average lifetime (387, 313 and 325 years) than those that broke down due to external institutional influences or were liquidated voluntarily (568 and 540 years). The most recent agency problems date back to the years 1763 (changing into a collegiate church), 1773 (control failure) and 1862 (mismanagement). Thus, in the last 150 years, agency problems were of little importance, which is consistent with the development of efficient governance in Benedictine monasteries.

Figure 2 about here

The findings on the reasons for closures indicate that a maximum of one quarter (26%) of the monasteries studied were unable to survive due to agency problems. The vast majority of monastic houses were closed due to external institutional factors or they still exist today. On average, monasteries survived 463 years, which suggests that agency problems in Benedictine monasteries are relatively small. These institutions are extremely stable.

In order to substantiate that Benedictine governance significantly contributes to the stability of monasteries, three aspects are of great importance:⁴ (1) The basic governance model was formed very early and has been more or less constant over time; (2) The adherence to a codex prevents the Benedictines from drifting away into other governance structures; (3) The external governance

⁴ Additionally, in 2007, we interviewed two experts on this subject: Father Nestor Werlen, historian in the Capuchin Abbey of Brig and Father Dr. Gregor Jäggi, historian in the Benedictine Abbey of Einsiedeln.

mechanisms of the Benedictine Order contribute to this stability, *without* removing autonomy and tradition from the individual monasteries. These three aspects are now discussed in turn.

The cornerstones of monastic governance can be dated back to the first millennium. Since then, the organizational structure has hardly been modified and is composed of the following positions: abbot and prior (the ‘CEOs’), officials (the ‘executive board’), the Convent (the religious community of a monastery, including padres and spiritual brothers), Consilium (the ‘advisory board’), donators (the ‘financiers’) and employees. Other stable elements of Benedictine governance are the autonomy of the institutions, their non-profit orientation, and the lifelong tenure of the monks to a particular monastery. There are some discontinuous elements in Benedictine governance. They refer to disputes over the structured routine, including the time allotted to prayer, reading and work, the culture of learning, including selection processes, education and the value system of the Benedictines. There are also disputes over the compensation system, which varied from little collective ownership to excessive individual ownership. Nevertheless, the Benedictines have always returned to the ideals set out by holy Benedict and his rules, a book of precepts written for monks living in a community (Regula Benedicti 2006, Eckert 2000). Adherence to a codex kept the monasteries from drifting away into other governance structures and helped them to master difficult times.

The external control mechanisms of the Benedictine governance were continuously developed. The external controllers, i.e. umbrella organizations, as well as the legal sequence of courts, show constant refinement and perfection, whether they were dealing with the total autonomy of a monastery or a friendly exchange and loose ties, or subsequent organization into Congregations and the Confederation. The Benedictines have developed sophisticated mechanisms of governance, in particular carefully planned ‘visitations’ from members of the order outside the monastery in question. The next section examines these governance mechanisms. Agency problems seem to be negligible in today’s Benedictine monasteries. This can be attributed to external control and its interplay with internal control.⁵

⁵ We substantiated this assumption in an interview with archabbot Benno Malfèr, who has been active for 8 years as the supreme ‘visitor’ of the Swiss Benedictine Congregation. He cannot remember any trouble concerning mismanagement, control failure, or management enrichment. A media analysis of the Benedictine abbeys in Baden-Württemberg, Bavaria and German speaking Switzerland of recent decades also support this appraisal.

HOW THE BENEDICTINES SOLVE PRINCIPAL-AGENCY PROBLEMS

Why do Benedictine monasteries survive so well and seldom fall prey to mismanagement, hostile takeovers or change of governance? This section introduces the specific corporate governance of the Benedictines in detail in order to contrast it with the governance of modern stock corporations.⁶ The first paragraph argues that monasteries build on strong internal control through a common value system, careful selection, socialization, participation, and monitoring. The second paragraph points out that the Benedictines backed up their internal arrangements with external arrangements, e.g. periodical monitoring or jurisdiction. Figure 3 gives a graphical overview of the corporate governance of a Benedictine monastery.

Figure 3 about here

Internal governance mechanisms

Internal control in the Benedictine monasteries can be divided into two main categories. Firstly, monasteries build on common value systems, careful selection and rigorous socialization processes. These arrangements can be explained by embeddedness theory and psychological economics. Secondly, monasteries grant participation rights to their monks and build largely on internal monitoring processes. Participation rights are in line with the recommendations of political economics. These internal monitoring processes in monasteries reduce agency problems.

Embeddedness in common value systems

While stock corporations establish control and supervisory institutions in order to monitor decision making, monasteries refer to common value systems in order to discuss possible solutions and come to conclusions (McGrath 2007). These value systems go far beyond ‘codes of best practice’. The Benedictine value system is based on three cornerstones: the bible, the rule of St. Benedict and the

⁶ Since there is hardly any literature on the corporate governance of monasteries, the following sources are used: rule, law and constitutions of Abbeys and Congregations, and expert interviews with Guido Muff (prior of the Abbey of Engelberg), Reto Krismer (managing director of the Abbey of Einsiedeln), Wolfgang Gehra (managing director of the Abbey of Plankstetten), and Benno Malfèr (archabbot and supreme visitor of the Swiss Benedictine Congregation and abbot of the Abbey of Muri Gries).

tradition of a particular monastery. Besides being based on the bible, the rule of St. Benedict is the most important influence in the daily life of a monastery. It contains universal rules similar to e.g. the categorical imperative of Kant. Benedict's writings reverberate in personal and economic interactions. Its universal character prevents bureaucratic decisions and actions. Only when problems arise, does monastic or canon law come into effect.⁷

The emphasis of Benedictines on implementing value systems, instead of using control- and supervisory institutions, is in line with the assumptions of psychological economics, therein in particular with behavioral economics, e.g. fairness-reciprocity theory (Dufwenberg and Kirchsteiger 2004; Falk et al. 2003; Rabin 1993) or the relevance of social (dis)approval (e.g. Akerlof 1980; Fehr and Falk 2002). Individuals react to a large extent based on their beliefs about other people's intentions. From this perspective, common value systems signal friendly intentions and "people feel obligated to respond to positive behavior received with positive behavior in return" (Groves et al. 1992: 480). Control and supervisory institutions, on the other hand, are more likely to signal neutral (economic exchange related) or even 'unfriendly' intentions, in the sense that these might signal distrust or insinuate the selfish nature of the employees (McGregor 1960). The empirical literature supports these insights. For example, Falk, Fehr and Fischbacher (2003) show in an experiment that proposers of fair intentions are met with more voluntary co-operation by responders than unfair intentions. Further evidence comes to the same conclusion: beliefs about fairness matter (Blount 1995; Cox 2004; Sobel 2005). The effect of social (dis)approval and its interaction with social norms and incentives has to be mentioned. An appropriate design of values, which fosters social approval, makes individuals happier and affects their behavior (for an overview see Fehr and Falk 2002; Gächter and Fehr 1999). To ensure that common value systems are suitable in guiding the individual behavior of the members of a monastery, the Benedictines build on careful selection and rigorous socialization processes.

Selection. Candidates for a monastic career go through a tight selection process in order to test their suitability. The selection process is more or less identical in every Benedictine monastery. There are four stages: *Every* candidate, independent of application credentials, is welcome to live in a monastery

⁷ Interviews made in 2007 with Father Guido Muff, Prior of the Abbey of Engelberg and Father Gregor Jäggi, Abbey of Einsiedeln.

for a few months. During these months, the candidate learns a lot about the value system of the Benedictines and has the opportunity to consider his motives carefully before becoming a full member. Thus, instead of pre-selecting employees, monasteries make use of self-selection. The decision to stay is, in part, handed back to the candidate. One could argue that today's selection process is less important, because only individuals with the right motives choose a monastic career. However, many aspirants do not fulfill the requirements. One year probation follows. Within this year, the novice learns the background of the value system, the Holy Scripture and church law. The other monks scrutinize his suitability. Temporary profession follows, lasting three years, and containing a monastic apprenticeship, or the beginning of studies. The underlying reason is that human beings sometimes change their minds. Profound education is required to provide a sound basis for decision-making. Only then can full membership, called solemn profession, be celebrated. Solemn profession involves the unconditional commitment of both parties. In each case, the Convent, i.e. the religious community of a monastery, has to give its blessing. (Schweizer Benediktinerkongregation 1986). Following the final oath to obey the Benedictine way of life, the new entrant becomes a full member of the monastic community and has broad participation rights.

The selection process of monasteries is in line with the theoretical assumptions of the embeddedness approach (Baker 1990; Granovetter 1985; Lubatkin et al. 2007; Uzzi 1996). Since purposive actions are embedded in ongoing systems of social relations, such systems contain valuable information about one's own past. This happens in collaboration with the individual or through information from a trusted source that has dealt with that person and found him or her trustworthy. In contrast to second-hand information, e.g. certifications or testimonials, this information is cheaper, richer, more detailed and accurate. First-hand information therefore enables the selection of trustworthy individuals.

The embeddedness principle, relying on first-hand information, has been empirically supported in the field of market transactions. For example, Baker (1990) characterizes the stock options market to be a social structure represented by networks of actors. The empirical analysis demonstrates that actors are subject to bounded rationality, and some act opportunistically. These actors must be embedded in networks; otherwise impeded communication among actors results in exacerbated option prices. Uzzi (1996) empirically analyzes the New York apparel economy and shows that firms organized in

networks, and thus relying on first-hand information about their trading partners, have higher survival chances than firms which maintain arm's length market relationships, i.e. firms relying on second-hand information about their trading partners. Empirical studies also suggest that CEOs promoted internally, compared to CEOs hired from outside, not only increase the future performance of a firm (Furtado and Rozeff 1987; Rost et al. 2008; Worrell and Davidson 1987; Zajac 1990), but also earn approximately 15.3 percent less (Murphy and Zábajník 2004). Finally, professional service firms, like the Boston Consulting Group or McKinsey, successfully practice the embeddedness approach as a selection tool in order to find suitable, trustworthy employees. Promotion decisions are fully dependent on first-hand information from numerous individuals about the behavior of a candidate. Furthermore, being appointed a partner is dependent on the agreement of all the partners in the office. However, in contrast to monasteries, professional service firms narrow down the pool of potential candidates based on second-hand information, e.g. using the curriculum vitae, certificates, testimonials and volunteering.

Socialization. In order to ensure living and working together successfully, careful socialization and the composition of an organizational identity is crucial. Two rules are essential: Firstly, with respect to the Benedictine values, dialogue among the monks is fostered, and any disagreements are addressed and solved. Secondly, a monastic partnership depends on a fulfilling life environment. Regarding the monks' professional lives, the Benedictines see work as a vocation and not only a professional activity; work is considered part of one's personal growth. This ethic has its sources in the first millennium, where Benedict saw work as a way of finding inner peace (Kieser 1987).

The Benedictines promote equality of treatment in daily life in order to integrate new members. From the very beginning, the novice is a part of the community; he participates in the same structures, including the daily routine, prayers, and meals. Being treated as an equal in a life and work community facilitates the establishment of common values (Wenger and Snyder 2000).

The Benedictines also use extensive learning programs, in which their codex and their knowledge are used to shape a common identity and facilitate the growth and development of all members (Reiber 2003). Apart from joint prayers, monasteries have implemented other learning practices, like daily readings at the communal dinner table. These readings deal with diverse topics, like the bible, politics,

philosophy or the history of the Benedictines and the respective monastery. Besides education, these institutions strengthen the awareness of belonging to something bigger than the particular monastery. The socialization lasts a lifetime and encourages an intrinsic transfer of the overall value system.

According to psychological economics, the socialization principles of the Benedictines increase the purpose and the intrinsic motivation of each organizational member, and thus the welfare of the whole organization (Deci 1975; Frey and Osterloh 2002). The incomplete contract literature emphasizes that, in complex environments, such as organizations, complete contracts cannot be written or enforced (Milgrom and Roberts 1992). Therefore honesty, intrinsic job satisfaction and intrinsic motivation lead to better results from the contracted parties than relying on monitoring or on monetary incentives (Gintis and Khurana 2006; Jensen 2006). Experiments confirm that employees exert more effort if labor contracts are regarded primarily as a 'gift exchange' rather than as a disciplinary tool (Akerlof 1982; Irlenbusch and Sliwka 2003). As far as knowledge work is concerned, 'management by intrinsic motivation' (Frey and Osterloh 2002; Osterloh et al. 2002) might even become the most important factor in sustaining a competitive advantage.

It is, however, more difficult to 'guide' this kind of motivation: intrinsic motivation cannot be enforced; it can only be encouraged. According to crowding theory (Frey 1997) and self-determination theory (Deci 1980; Deci and Ryan 2000), organizations can encourage intrinsic motivation by creating an intrinsically rewarding job environment (Hackman and Lawler 1971; Hackman and Oldham 1974) and by supporting employees' feelings of autonomy, competence and relatedness (Deci 1980; Deci and Ryan 2000). Monasteries today strive for an intrinsically rewarding job environment. Individuals have the chance to develop skills and express themselves based on their interests. They also support the monks' feelings of competence and belonging, for example by emphasizing education or fostering a strong community, described by many monks as a family. As mentioned already, a joint attempt at clarifying any points of contention in a mutually respectful and fair way contributes to an intrinsically rewarding job environment. The empirical literature suggests that such surroundings and feelings of competence and relatedness increase intrinsic motivation (Gagné et al. 1997), contextual performance (Brief and Motowidlo 1986; Gagné 2003; Organ 1988; Van Dyne et al. 1994), contributions to the common good (Fehr and Falk 2002; Frey et al. 1996; Frey and Meier 2004; Gneezy and Rustichini

2000), as well as co-operative learning (Janz and Prasarnphanich 2003). To run a monastery, Benedictines often induce their members to specialize, thus fostering diversity. Diversity not only facilitates broader decision making (Osterloh and Frey 2006), but also creativity and innovation (Perry-Smith and Shalley 2003). History substantiates that monasteries have contributed to economic progress through numerous innovations; they have produced excellent scientists, and have supported administrative inventions, such as the division of labor (Kieser 1987).

Members' Voice

The abbot (the 'CEO' of a monastery) carries the main responsibility for spiritual and economic concerns, represents the monastery in external affairs, delegates duties and is in charge of the well-being of every friar. Unlike stock corporations, the monks possess substantial participation rights and monitor the management (Schweizer Benediktinerkongregation 1986; St.Ottilien Benediktinerkongregation 2004).

Participation. The Convent consists of all padres and brothers with a solemn profession. Every one of these monks has equal rights and may vote in elections. The Convent has four major tasks: Firstly, the Convent is responsible for decision-making in important business affairs, e.g. the acceptance of a novice as a full member or the expansion of a monastery through acquisition. Secondly, the Convent democratically elects the abbot (recently, the tenure of an abbot in some abbeys has been restricted to 12 years instead of being lifelong) and employee representatives for the 'advisory board', i.e. the Consilium. Thirdly, the Convent evaluates whether a proposed prior (the vice 'CEO') is eligible. However, in order to make sure that the team in charge works in harmony, the prior is selected and nominated by the abbot. Fourthly, members of the Convent have the right to advance requests, to give opinions and to foster dialogue among the monks (Eckert 2000).

Monitoring. Monasteries complement participation processes with internal monitoring processes. Similar to some stock corporations, monasteries have a two-tier board structure, i.e. there is a management board (all executive directors, i.e. the abbot and the officials) and a separate advisory board (some executive and some 'non-executive' directors, i.e. the Consilium). In contrast to stock corporations, the Consilium is a supervisory board consulting the management team. It only has the power to decide in rare, specific cases. The Consiliums' main task is to consult with the management.

They discuss contentious issues without having the final responsibility for major business decisions. The Consilium exclusively consists of insiders, i.e. elected members of the Convent (employee representatives) and nominated members of the management team (officials) (Schweizer Benediktinerkongregation, 1986). The reliance on insiders stands in sharp contrast to agency theory (Lorsch & MacIver, 1989; Mizruchi, 1983; Zahra & Pearce, 1989), where only outsiders are believed to be independent of the firm management and thus are taken to be able to prevent agency problems (Fleischer, Hazard, & Klipper, 1988; Waldo, 1985).

According to political economics, the voice of employees, i.e. relying on inside monitoring and comprehensive participation rights, is important in preventing agency problems. Employees have personal experience with managers and are thus highly suitable for selecting and controlling the management (Benz and Frey 2007; Hirschman 1970). Employees invest in firm-specific knowledge (Osterloh and Frey 2006). These investments cannot be protected, or only at high cost, by contracts ex ante when the parties enter into a relationship. As a consequence, employees have no incentive to undertake firm-specific investments if their bargaining position is not protected after they enter into the labor contract (Blair and Stout 1999; Freeman and Lazear 1996; Zingales 1998). However, the most relevant asset for a company's sustained competitive advantage is firm-specific knowledge, which needs to be generated, accumulated, transferred, and protected (Foss and Foss 2000; Grandori and Kogut 2002; Penrose 1959). Only democratic election systems create strong competition for filling unfilled positions (Benz and Frey 2007; Schelker and Eichenberger 2004). Democratic constitutions actively promote the principle of checks and balances. This does not prevent one person or branch from dominating for a period of time, but it ensures that the other persons or branches can reassert themselves in due time (Frey 1983).

The substantial participation rights in monasteries stand in sharp contrast to the principle of hire and fire that exists in many stock corporations: padres and brothers have a voice in running the monastery (Auf der Maur 2007), they can discipline the abbot and the management team (the officials) and thus prevent fraudulent behavior. The (lifelong) tenure of monks is compensated by considerable voting rights and co-determination. They provide a strong incentive to invest in firm-specific know-how (Osterloh and Frey 2006).

A large literature emphasizes the importance of these ideas for stock corporations. The advantages of inside control are empirically supported. Contrary to the argument that outside directors are more effective in defending the interests of shareholders, most research finds that a higher proportion of outside directors increases executive pay and, along with it, agency problems (Boyd, 1994; Conyon & Peck 1998; Core, Holthausen, & Larcker, 1999; David & Kochhar & Levitas, 1998; Lambert, Larcker, & Weigelt, 1993; Main, 1991; Westphal & Zajac, 1994). Some authors argue that, thanks to a higher extent of firm-specific knowledge, insiders can control the management more effectively (Baysinger & Hoskisson, 1990; Baysinger *et al.*, 1991). The idea of democratic institutions and participation rights has been transferred to stock corporations (Hansmann 1990). The case of monasteries suggests that CEO duality does not necessarily weaken corporate governance. Agency theory argues that CEO duality generally promotes CEO entrenchment by reducing the effectiveness of board monitoring (Finkelstein & D'Aveni, 1994). Advocates of stewardship theory argue that the joint structure provides unified firm leadership and removes any internal or external ambiguity with respect to who is responsible for firm processes and outcomes (Anderson & Anthony, 1986; Donaldson, 1990; Lipton & Lorsch, 1993). The empirical evidence is accordingly mixed: some empirical studies support that CEO duality is positively related to executive compensation and thus increase agency problems (Beatty & Zajac, 1994; Boyd, 1994; Core, Holthausen, & Larcker, 1999; Fiss, 2006; Gray & Canella, 1997; Sridharan, 1996). Other studies show a negative effect on executive compensation; thus, CEO duality weakens agency problems (Westphal & Zajac, 1994; Conyon & Peck, 1998). Benedictine monasteries suggest that a combination of both theories may solve agency problems best: On the one hand, the responsibility of the abbot in monasteries is extensive. He has to act like an 'entrepreneur' because he cannot shift his responsibility to the board. On the other hand, his power is reduced through competitive elections and extensive internal monitoring.

External governance mechanisms

The interplay between internal and external control mechanisms in Benedictine monasteries is of particular interest for stock companies. History shows that the internal control mechanisms of monasteries sometimes fail. For example, in situations where the abbot and the Convent join in

enriching themselves, or simply do not care about the economic situation, external control is important. The external control is hierarchically organized and consists of jurisdiction and periodical monitoring. Each monastery is embedded in a hierarchical structure of Congregations, the Benedictine Confederation and the Holy See. The Congregation is the umbrella organization of the monasteries, in most cases within a geographical region. It is responsible for the monitoring of a monastery in its area of accountability. Abbots and some delegates of the respective houses represent each Congregation. These representatives form the Congregational chapter and elect the archabbot as president. The archabbot is recruited from an associated monastery to guarantee internal know-how. Each Congregation is a part of the Benedictine Confederation. The Confederation is an independent institution and facilitates the exchange of experiences between Congregations and the Holy See, but has no direct influence on the decision process.

Jurisdiction. Benedictine monasteries belong to the Catholic Church and its law, and depend on the Holy See. Besides church and constitutional law, the legal norms of the Congregation are binding for a particular monastery. The jurisdiction of the Congregation is the first instance outside the monastery where disputes are settled. The Congregation supervises the election of abbots and organizes the ‘visitations’ of monasteries. They complement this law with their own statutes, the so-called *Consuetudines* (1991).

Periodical monitoring. As the legal rules are very general with respect to economic issues, the so-called ‘visitation’ is the most important tool for disciplining the Convents. Every four to five years, delegates of the Congregation visit a community to evaluate the condition of the monastery. The visitation considers not only the economic situation of a monastery and its fields of activity, but also the spirit and the discipline of the community and their members, the personal relationships between monks and their superiors, and the abuse of authority (Schweizer Benediktinerkongregation 1986). In addition to auditing, the visitors make use of questionnaires and interviews to detect any problems and failures. They analyze processes in-depth, ask specific questions and refer to aspects, which pass

unnoticed in the normal daily routine. The most important function of ‘visitations’ is to induce reflection, and not to exercise control and discipline.⁸

The organization of the external control in monasteries corresponds to insights in political economics. In democratic public government, independent institutions control the heads of government and the members of the cabinet - the court of accounts or, in the United States, the General Accounting Office (Benz and Frey 2007). These courts are usually part of the judicial branch, but are sometimes directly elected by the citizens. Empirical evidence indicates that such courts successfully restrain local governments from abusing their power and induce them to act more in accordance with the citizens’ interests (Schelker and Eichenberger 2004).

The corporate sector often fails in clearly separating the executives and external auditing functions. In many cases, the auditing firm is chosen by the CEO and general management (Economist 2004). Stock corporations can learn from the public sector by strengthening the independence of the auditing process (Benz and Frey 2007). Stock corporations could rely on the democratic mechanism of direct elections for the members of the audit committee and the auditing firm by the shareholders.

The monastic approach suggests that stock corporations could enrich independent auditing processes by ‘visitations’. ‘Visitations’ not only control the books and the economic situation but also consider firm culture, i.e. the spirit and the discipline of the monks, the personal relationships between monks and their superiors, and the abuse of authority. In contrast to other forms of external control mechanisms, e.g. the elimination of CEO duality, independent boards of directors, pay-for-performance, or draconic punishments envisaged by the Sarbanes-Oxley Act, this kind of external control does not reduce intrinsic motivation of the management or the employees. Crowding-out of intrinsic motivation only occurs if people perceive an external intervention as controlling and hence as reducing their self-determination (for an overview compare Deci et al. 1999; Frey and Jegen 2001).

DISCUSSION: WHAT CAN STOCK CORPORATIONS LEARN?

Our paper starts with the observation of unsolved agency problems in stock corporations. This kind of governance disregards internal mechanisms, such as voice, and intrinsic motives, such as loyalty or

⁸ Interviews carried out in 2007 with Reto Krismer, managing director of the Abbey of Einsiedeln and Archabbot and first ‘visitor’ of the Swiss Congregation Benno Malfèr.

trust. These internal arrangements help with avoiding problems and facilitate better control. The corporate governance of stock corporations can learn from monasteries, which emphasize these internal mechanisms and demonstrate their operability. Many of these governance mechanisms are in line with new proposals by psychological or political economics and embeddedness theory. In view of current corporate scandals, such as the bankruptcies of Enron, Qwest, Global Crossing and WorldCom, where CEOs collected an average salary of over \$100 million (Bratton 2002), monasteries show that alternative models serve to enhance corporate governance. Beside the plea to find new ways of solving agency problems, the example of monasteries offers concrete ideas.

Hardly any organizations exist which internalize value systems in such a profound and perfect way. Corporations may refer to their own tradition. Many companies are proud of their 'firm culture'. It serves to attract suitable employees, customers and shareholders, and should guide their behavior. Monasteries demonstrate that common values can be fostered if they are an integral part of living and working together. This requires rigorous and credible selection criteria and continuous socialization processes. Stock corporations could learn by using a probation period for candidates, rather than relying on second-hand information, like grades, testimonials, or multiple-choice aptitude tests. Many companies hire top managers from outside. The example of monasteries shows that internal promotions can take advantage of comprehensive information about a candidate's past behavior. Companies often engage in sporadic 'team building' measures, such as corporate parties, corporate excursions, or corporate training. Firms can learn from monasteries to socialize, inform and educate their employees with regular and sustainable tools, such as lunch seminars or the examination of their own identity. Companies often fill vacancies based on job advertisements and precise job descriptions. The example of monasteries shows that work is more than a career – it is seen as a vocation that fosters one's personal and spiritual growth, emphasizes cooperation rather than competition and focuses on increasing work effort and efficiency.

Monasteries are specialists in the accumulation of internal know-how. While tenure of employees within companies is certainly not lifelong, and often quite short, firms should encourage firm-specific investments by giving appropriate incentives to their employees. The monastery approach demonstrates that democratic elections of the CEO, internal monitoring processes, and employee

representation on an advisory board foster and protect firm-specific investments by reducing agency problems. Stock corporations could pre-select suitable CEO candidates by relying on first-hand information from numerous individuals about the behavior of these candidates. Before election, these candidates could – like politicians – present their strategic vision for the firm. Such systems create strong competition for unfilled positions and are based on personal experience with the managers. Further, stock corporations could democratically elect employee representatives for an advisory board. Its main task should be to consult with management, i.e. to discuss contentious issues without having the final responsibility for major business decisions. This kind of inside monitoring and participation rights actively promotes the principle of checks and balances and pays attention to firm-specific knowledge without shifting the responsibility from management to employees.

Finally, stock corporations can learn from monasteries regarding the organization of external control. External control institutions in stock corporations should obtain their independency by counting on shareholder representatives. In contrast to monasteries, which operate as life partnerships and thus are mainly responsible for insiders, the main objective in stock corporations is financial value added for shareholders. In stock corporations, shareholder representatives could supervise the election of the CEO and directly elect the members of the audit committee and the auditing firm. Further, shareholder representatives could monitor a stock corporation with periodical ‘visitations’ in order to control the firm culture, the personal relationships between employees and management, and any abuse of authority.

When considering what corporations can learn from Benedictine monasteries, it should be kept in mind that the two differ fundamentally. Three limitations of the monastic approach need to be addressed: the tendency to promote groupthink, the danger of dictatorship and the critical subject of life long commitment.

Firstly, since monasteries build on strong and uniform value systems, individuals not only increase their social identity with the group, but groups also become more cohesive (Tajfel 1981). The theory of groupthink hypothesizes that cohesive groups are most likely to experience groupthink (Janis 1972; Janis 1982). Groupthink includes the belief in the inherent morality of the group and stereotypes of out-groups. It leads to the systematic and emotional devaluation of ideas which were not discovered or

launched within their own social collective (Turner and Pratkanis 1998). Such a groupthink-phenomenon leads to the not-invented-here (NIH) syndrome (Katz and Allen 1982), which refers to an actor's negative attitude towards external technologies and innovations. As a result, technological opportunities or innovative ideas are only exploited to a suboptimal degree. Further, groupthink promotes aggressiveness towards other groups and can even lead to violence, e.g. terrorist acts (Frey 2004; Frey and Luechinger 2002).

Secondly, social comparison theory hypothesizes that cohesive groups are more susceptible to expert power (Festinger 1954), leading to dictatorship and abuse of power (Coleman 1990). Individuals with high potential can help to increase the innovativeness of social systems because they avert the constitution of a group consensus (Hauschildt and Schewe 1997; Rost et al. 2007). But there is the possibility of a drawback in that the opinion forming of groups is dependent on a few individuals. Such systems have a disposition to over-reliance. Blind trust often ends in the abuse of a dominant position, and thus increases agency problems (Conger and Kanungo 1987).

Thirdly, the life long commitment to a monastery has to be considered. Strong commitment is desirable, but not in such an absolute way as in monastic institutions. While giving voice and developing loyalty, they (consciously or unconsciously) tend to build exit barriers. When exit costs are exorbitant, hindering people from leaving, negative outcomes, like discouragement, will occur (Hirschman 1970).

For these reasons, stock corporations have to balance the advantages and disadvantages of common value systems and commitment. Value systems should be strong enough to select and socialize appropriate employees and open enough to avoid dogmatism and unbalanced power, i.e. value systems must also honor new and challenging ideas. Stock corporations can prevent group cohesion by promoting the diversity of their employees and their managers. Diversity includes nationality, gender, age, educational, functional or occupational backgrounds and reduces groupthink and expert power (Flap 1988). Commitment should be fostered, without implementing exit barriers and constraining the employees too much.

Finally, the monastic constitution has some drawbacks and can learn from stock corporations. Many monastic institutions, which have to face substantial challenges, do so. While we argue that both

institutions can learn from each other, we highlight the many aspects in which modern corporations can profit from the history proven monastic organization of Benedictine abbeys.

CONCLUSION

The monastery approach demonstrates that stock corporations can prevent agency problems by complementing external discipline with internal behavioral incentives and by utilizing democratic, supportive external control mechanisms. Internal behavioral incentives complement agency theory's conception of the homo oeconomicus by referring to intrinsically motivated actors, who not slavishly react to external incentives. Internal arrangements facilitate a better control through voice in the form of democratic rights of participation and through loyalty and trust expressed in the protection of firm-specific investments. Democratic, supportive external control mechanisms expand agency theory's conception of the homo oeconomicus by referring to self-determined actors, who mainly react to external incentives which are in their interest and do not crowd out their intrinsic motivation.

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FIGURES AND TABLES

Figure 1. Average lifetime of Benedictine monasteries (Side of graph: Number of Benedictine Monasteries)

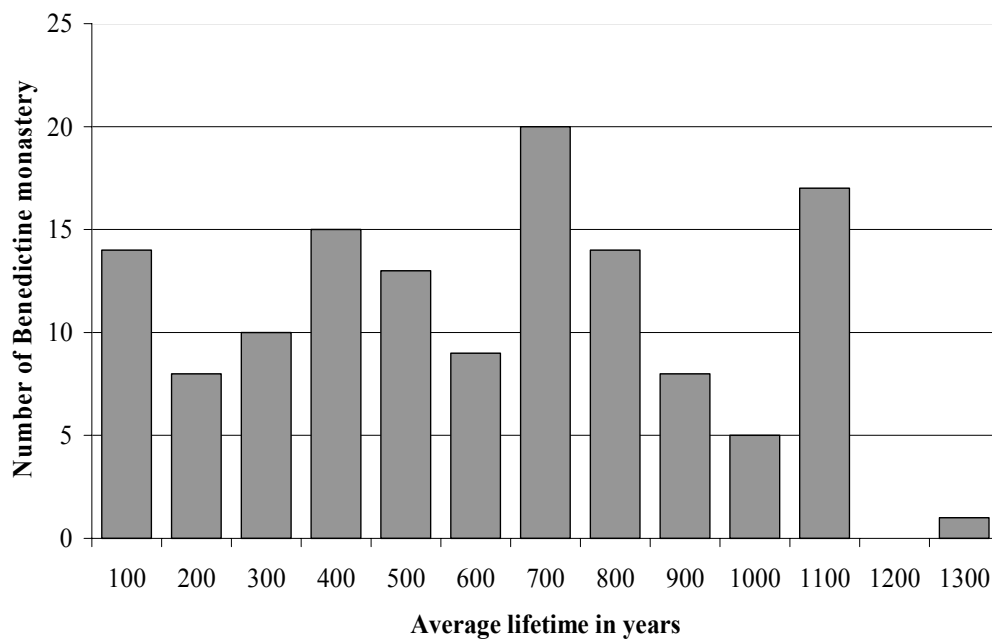


Figure 2. Absolute number of Benedictine monasteries and collegiate churches over time

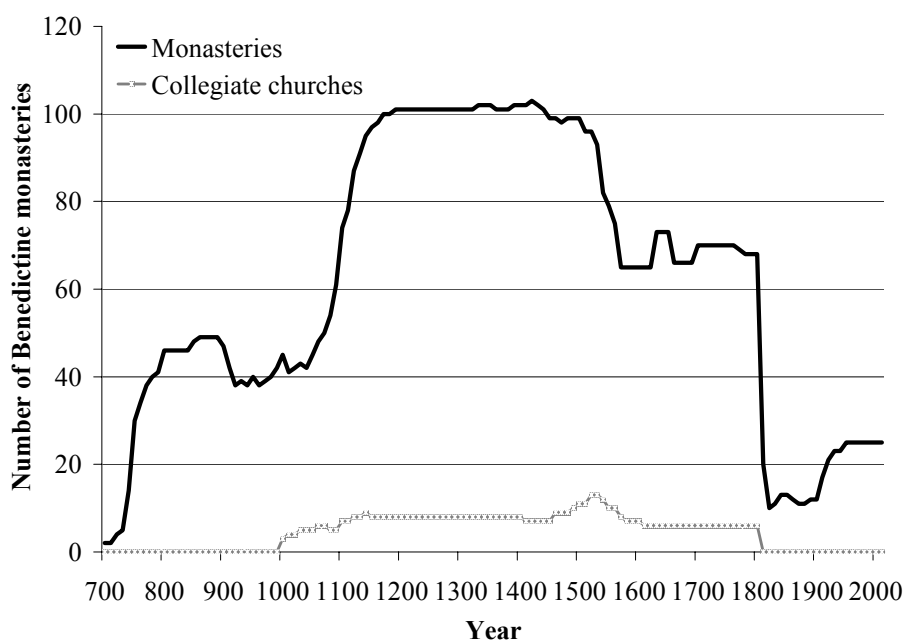
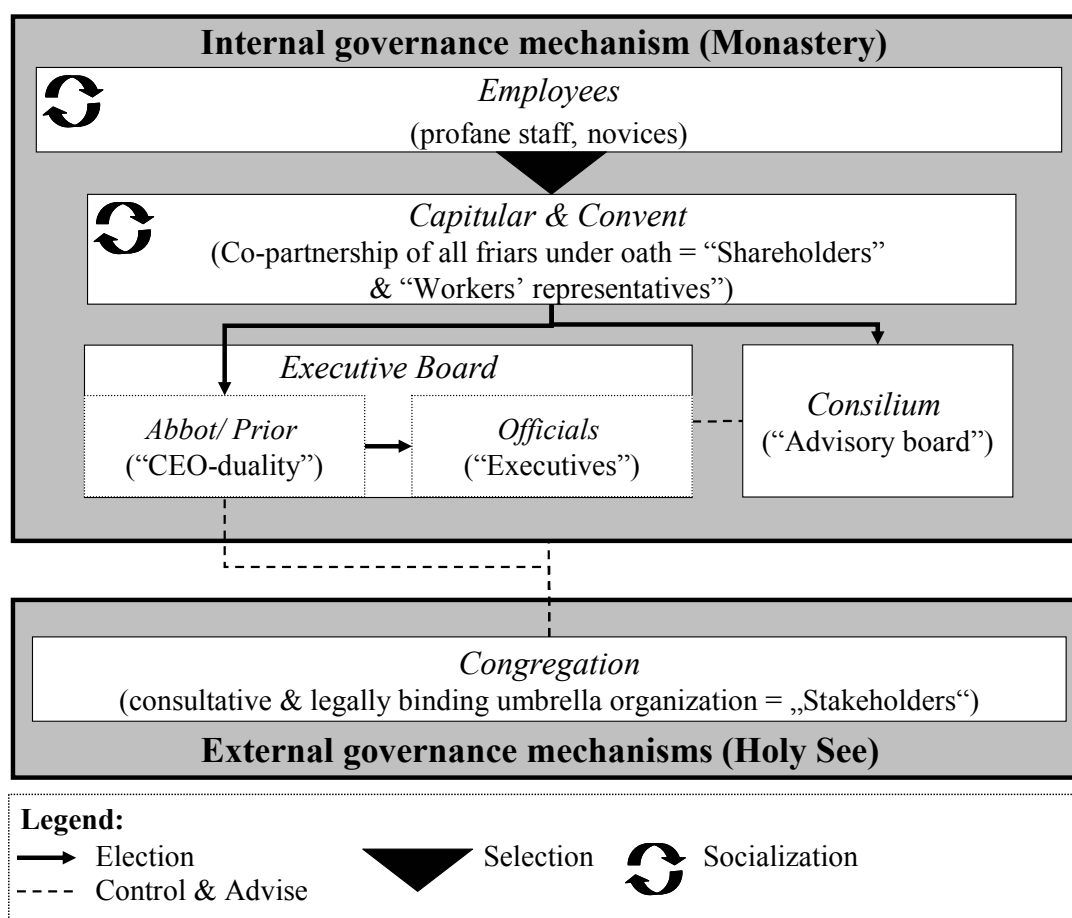


Figure 3. Corporate governance mechanisms of the Benedictines**Table 1.** Survival and closure of monasteries

Reason for closures	Number of Benedictine Monasteries	in %	Average lifetime in years	Year of the last event
No closure	25	17%	287	-
Non agency problem related closures				
Voluntary closure	6	4%	540	1883
External institutional factors	79	53%	568	1862
	85	57%	-	-
Agency problem related closures				
Mismanagement	20	13%	387	1862
Change into other organizational form	11	6%	313	1763
Control failure	9	7%	325	1773
	40	26%	-	-
Total closures	125	83%	-	-

Appendix I: All Benedictine abbeys ever in Baden-Württemberg, Bavaria and German speaking Switzerland, incl. reasons for closure

Abbey	Year established	Closure	Reason	Year rebuilt	Closure	Reason
Alpirsbach	1095	1535	Reformation 1: T. in Prot. school	1629	1648	Restitution edict
Amorbach	approx. 700	1803	Secularization			
Andechs	1455	approx. 1570	Reformation 2: Running short of novices Custom loses relevance (e.g. pilgrimage)	1588	1803	Secularization
Anhausen	1113	1558	Reformation 1: T. in Prot. chapter	1629	1648	Restitution edict
Ansbach	748	approx. 1000	T. in collegiate chapter (until 1563 ⁹)			
Asbach	1139	1803	Secularization			
Attel	1145	1803	Secularization			
Augsburg St. Stephan	1834	--				
Augsburg St. Ulrich and Afra	1012	1537	Reformation 1	1548	1802	Secularization
Auhausen	approx. 1100	1534	Reformation 1			
Aura an der Saale	1113	1564	Mismanagement (plus warlike troubles)			
Bad Wimpfen	1947	--	(Refoundation of the Abbey of Grüssau, frightened away during second World War)			
Banz	approx. 1060	1568	Reformation 2, neglect	1574	1803	Secularization
Benediktbeuren	approx. 740	1803	Secularization			
Beinwil-Mariastein	approx. 1100	1554	Extinction of the Convent, because of destruction and peasant uprising	1633	--	many times in exile
Berg im Donaugau	769	approx. 900	Raids by the Hungarians			
Beuron	1868	--				
Biburg	1133	1554	Reformation 2, extinction of the Convent, disciplinary and economic problems			
Blaubeuren	1085	1562	Reformation 1: T. in Prot. school	1630	1648	Restitution edict
Chiemsee	approx. 750	891	Subordination			
Disentis	approx. 750	--	Oldest abbey in this examination, continuously occupied			
Donauwörth	1110	1803	Secularization			
Ebersberg	1013	1590	Mismanagement (Reformation brings few new entrants)			
Echenbrunn	1120	approx. 1445	Extinction of the Convent	approx. 1460	1557	Reformation 1: Destroying
Eichstätt	1166	approx. 1350	Too little income, shortage of novices (1422 pursued as collegiate church)			

⁹ <http://www.ansbach.de/cda/showpage.php?SiteID=66&lang=de>, 23.08.2007.

Abbey	Year established	Closure	Reason	Year rebuilt	Closure	Reason
Einsiedeln	934	1798	Helvetik: short term closure of the abbey	1803	--	
Elchingen	approx. 1120	1802	Secularization			
Ellwangen	764	1460	Collegiate chapter (until 1802) ¹⁰ , additionally caused through rising costs, plague and fires			
Engelberg	approx. 1100	--				
Ensdorf	1121	1525	Neglect	1695	1802	Secularization
Erlach	approx. 1100	1528	Reformation 1			
Ettal	1332	1803	Secularization	1907	--	
Ettenheimmünster	approx. 800	1803	Secularization			
Faurndau	approx. 800	approx. 1120	T. in collegiate chapter (until 1536 ¹¹)			
Feuchtwangen	approx. 800	approx. 1004	Presumable t. in collegiate chapter			
Fischingen	approx. 1138	1531	Reformation 1	1540	1848	Political shut down (liberalism)
Frauenzell	1424	1522	Mismanagement, misconduct of the rule	1582	1803	Secularization
Fultenbach	approx. 739	1449	Decline leads to administration by the Augsburg Hochstift (influence of the diocese)	1471	1773	Overextension: forced administration by the abbeys of Neresheim / Ottobeuren ¹²
Füssen	approx. 750	1802	Secularization			
Gengenbach	approx. 740	1807	Secularization			
Gottesau	approx. 1080	1527	Assumed to be destroyed in peasant wars	1630	1648	Restitution edict
Heidenheim	752	1537	Reformation, rather 2 ¹³			
Herrieden	approx. 790	888	Bishop closes abbey (adoption of the manors)			
Hirsau	approx. 830	approx. 1000	T. in collegiate chapter, then closure	1065	1560	Reformation 1: T. in Prot. school
Honau (Schottenkloster)	approx. 730	approx. 1000	Secularization, t. in collegiate chapter (at least until 1398)			
Ilmmünster	approx. 762	1060	T. in collegiate chapter until 1493 ¹⁴			

¹⁰ http://de.wikipedia.org/wiki/F%C3%BCrstpropstei_Ellwangen, 23.08.2007.

¹¹ <http://www.la-bw.de/kloester-bw/klostertexte.php?kreis=Lkr.%20Göppingen&bistum=&alle=1&ungeteilt=&art=&orden=&orte=&buchstabe=&nr=55&thema=Geschichte>, 23.08.2007.

¹² http://de.wikipedia.org/wiki/Kloster_Fultenbach, 23.08.2007.

¹³ <http://www.hahnenkamm.de/heidenheim/kloster/>, 23.08.2007.

¹⁴ http://de.wikipedia.org/wiki/Kloster_Ilmm%C3%BCnster, 18.09.2007.

Abbey	Year established	Closure	Reason	Year rebuilt	Closure	Reason
Irsee	1186	1802	Secularization			
Isny	1096	1350	Plague	1362	1803	Secularization
Jonschwil	before 900	approx. 950	Supposedly extinction of the noble family			
Kastl	1102	1563	Reformation 2, voluntary hand over (preceding mismanagement)			
Kempten	752	1803	Secularization			
Komburg	1078	1488	T. in collegiate chapter (until 1802)			
Konstanz (Schottenkl.)	approx. 1100	1529	Neglect, abbey loses significance. Closed through the city of Konstanz (fostered through Reformation)			
Luzern	approx. 740	approx. 820	Crisis of the nobility	850	approx. 1000	Downgraded to a dependent house (Murbach), background unknown
Lorch	approx. 1100	1563	Reformation more likely 1	1630	1648	Restitution edict
Mallersdorf	1109	1803	Secularization (16th century: major troubles, partial dependence)			
Marienberg	approx. 1090	1808	Secularization	1816	--	
Memmingen	1167	1435	Extinction → Downgraded to dependent house	1483	1498	Voluntary takeover through Augustinians due to extinction
Metten	766	approx. 910	Raid by the Hungarians	1157 1840 1695	1803 -- 1803	Secularization
Michelfeld	1119	1556	Reformation 1			
Michelsberg	1015	1803	Secularization			
Mönchröden	approx. 1147	1525	Reformation 1 (preceding plundering by peasants)			
Mönchsdeggingen	approx. 950	1802	Secularization			
Moosburg	8 cent.	1027	T. in collegiate chapter (until 1598 ¹⁵)			
Mosbach	approx. 770	approx. 1010	T. in collegiate chapter (until 1556)			
Münchaurach	approx. 1126	1525	Destroyed in peasants' revolt			
München St. Bonifaz	1850	--				
Münchsmünster	approx. 750	approx. 910	Raids by the Hungarians	approx. 1130	1554	Extinction during Reformation (2)
Münchsteinach	1133	1529	Reformation 1			
Münsterschwarzach	815	1803	Secularization	1914 1945	1941 --	Shut down 3. Reich
Muri	1065	1841	Political closure (liberalism)	1846	--	Asylum and restart in Gries

¹⁵ http://de.wikipedia.org/wiki/Benutzer:Schnatz/Liste_der_Benediktinerkl%C3%B6ster, 23.08.2007.

Abbey	Year established	Closure	Reason	Year rebuilt	Closure	Reason
Murrhardt	approx. 800	1552	Reformation more likely 1 ¹⁶ , Prot. school	1634	1648	Restitution edict
Neresheim	1120	1802	Secularization	1920	--	
Neuburg	1928	--				
Neustadt am Main	768	1803	Secularization			
Niederaltaich	741	1803	Secularization	1930	--	
Nürnberg (Schottenkl.)	approx. 1140	1525	Reformation 2: Voluntary hand over			
Oberaltaich	approx. 1100	1803	Secularization			
Ochsenhausen	1392	1803	Secularization			
Odenheim	approx. 1110	1503	T. into chapter of knights (until 1803 ¹⁷)			
Ottobeuren	approx. 764	1802	Secularization partially avoided: Soon t. in a priory (dependent house)	1920	--	Monastery never completely deserted
Petershausen	993	1530	Reformation 1: Turnout and destruction	1556	1802	Secularization
Pfäfers (Pfaffenmünster)	approx. 750	1838	French Revolution leads to economic misery, additionally identity crises about direction and calling of the abbey (insufficient information)			
Plankstetten	1129	1806	Secularization	1917	--	
Prüfening	1109	1803	Secularization			
Prüll	approx. 997	1485	Encumbrance leads to takeover (Carthusians)			
Regensburg St.Emmeram	before 739	1812	Secularization			
Regensburg St. Jakob (Schottenkloster)	1089	1862	Reduction of members leads to t. in priory and finally to closure			
Reichenau	approx. 724	1540	Hostile incorporation in the diocese of Konstanz (bishop chapter) and Downgrading in priory (until 1799)			
Reichenbach	1118	1556	Reformation, more likely 2 (voluntary: abbot)	1695	1803	Secularization
Rheinau	approx. 780	1799	Helvetik: The French close the abbey after the battle of Zurich	1803	1862	Political closing (liberalism)
Rohr	1946	--				
Rott am Inn	approx. 1083	1803	Secularization			
Schaffhausen	approx. 1060	1524	Reformation 2, t. in collegiate chapter (until 1529)			
Schäftlarn	762	approx. 930	unknown	1910	--	
Scheyern ¹⁸	1095	1803	Secularization	1842	--	

¹⁶ http://www.murrhardt.de/index.php3?ber=m2&topic=geschichte_kloster2, 23.08.2007

¹⁷ <http://www.odna.de/frames/start-frame.htm>, 23.08.2007

¹⁸ In Bavaria King Ludwig 1 deserves extraordinary merits. After secularization, many abbeys could be 'resurrected' due to his support.

Abbey	Year established	Closure	Reason	Year rebuilt	Closure	Reason
Schienen	approx. 800	909	Incorporation in the abbey of Reichenau (1215-1757 Propstei), inexplicit if hostile.			
Schlehdorf	approx. 740	approx. 1100	Probably t. in collegiate chapter (from 1140 collegiate chapter of the Augustinians) ¹⁹			
Schliersee	approx. 779	approx. 900	unclear, later collegiate chapter (1141 - 1803)			
Schuttern	approx. 750	1806	Secularization			
Schwarzach	pres. 749	approx. 1000	unclear	1124	1588	Encumbrance, internal discord, external pressure
	1590	1803	Secularization			
Schweiklberg	1914	1941	Shut down 3. Reich	1945	--	
Seeon	994	1803	Secularization			
Sinsheim	approx. 1095	1496	T. in collegiate chapter (until 1565 (Reformation))			
Staffelsee	approx. 738	810	unclear			
St. Blasien	approx. 1000	1806	Secularization			
Stein am Rhein	approx. 970	1581	Voluntary incorporation in the abbey of Petershausen			
St. Gall	719	1805	Lack of adaptability, monastery insists on exceptional position under constitutional law - political closing			
St. Georgen	1083	1806	Secularization (Reformation: 1566 turnout and rebuilt in Villingen)			
St. Johann	approx. 1100	1555	Hostile takeover through the abbey of St. Gall. Downgrade into priory			
St. Ottilien	1893	1941	Shut down 3. Reich	1945	--	
St. Peter im Schwarzwald	1093	1806	Secularization			
St. Trudpert	pres. 9 cent.	1806	Secularization			
St. Veit bei Neumarkt	1121	1802	Secularization			
Tegernbach	approx. 750	approx. 900	unclear			
Tegernsee	approx. 750	1803	Secularization			
Theres	approx. 1045	1802	Secularization			
Thierhaupten	approx. 750	approx. 900	Raids by the Hungarians.	1028	1452	Economical and moral impoverishment: Administrators bridge over
	approx 1500	1803	Secularization			
Trub	1139	1528	Reformation			
Vornbach	1094	1803	Secularization			
Wagenhusen	1119	1417	Hostile incorporation in the abbey of Schaffhausen			

¹⁹ http://de.wikipedia.org/wiki/Kloster_Schlehdorf, 23.08.2007.

Abbey	Year established	Closure	Reason	Year rebuilt	Closure	Reason
Weihenstephan	1021	1803	Secularization			
Weingarten	approx. 740 ²⁰ 1946	1802 --	Secularization	1922	1940	Shut down 3. Reich
Weissenohe	1053	1554	Reformation more likely 2 because of encumbrance, bad discipline and recruiting problems	1695	1803	Secularization
Weltenburg	7 cent. 1128	approx. 900 1803	Raids by the Hungarians Secularization, from 1842 priory	approx. 1000 1913	1123 --	Hostile takeover Augustinians
Wessobrunn	approx. 750	approx. 900	Raids by the Hungarians	1065	1323	Encumbrance, short term incorporation into the Cistercian Abbey of Stams
Wiblingen	after 1323 1093	1803 1806	Secularization Secularization			
Wiesensteig	861	approx. 1100	T. in collegiate chapter (until 1803)			
Wülzburg	approx. 1050	1523	T. in collegiate chapter (until 1537 Reformation)			
Würzburg St. Burkard	748	10 cent.	unclear	983	1464	T. in chapter of knights (until 1803) ²¹
Würzburg (Schottenkl.)	1134 1595	1497 1763	Running out of novices T. in priory	1504	1547	Running out a second time
Würzburg St. Stephan	approx. 1057	1803	Secularization			
Zwiefalten	1091	1802	Secularization			

Legend

Reformation 1: Forced closure

Reformation 2: Indirect closure (voluntary hand over due to changed mentality, declining convents, weakening of the community)

Prot.: Protestant

T.: Transformation

²⁰ Founded in Altomünster, transfer in 1056

²¹ <http://www.wuerzburg.de/tourismus/sehenswertes/31,1737.html>, 23.08.2007.

Appendix II: Average lifetime of the abbeys

Abbey	Year established	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Lifetime
Alpirsbach	1095	1535	1629	1648					459
Amorbach	700	1803							1103
Andechs	1455	1570	1588	1803					330
Anhausen	1113	1558	1629	1648					464
Ansbach	748	1000							252
Asbach	1139	1803							664
Attel	1145	1803							658
Augsburg St.Stephan	1834	2007							173
Augsburg St.Ulrich und Afra	1012	1537	1548	1802					779
Auhausen	1100	1534							434
Aura an der Saale	1113	1564							451
Bad Wimpfen	1947	2007							60
Banz	1060	1568	1574	1803					737
Benediktbeuren	740	1803							1063
Beinwil-Mariastein	1100	1554	1633	2007					828
Berg im Donaugau	769	900							131
Beuron	1868	2007							139
Biburg	1133	1554							421
Blaubeuren	1085	1562	1630	1648					495
Chiemsee	750	891							141
Disentis	750	2007							1257
Donauwörth	1110	1803							693
Ebersberg	1013	1590							577
Echenbrunn	1120	1445	1460	1557					422
Eichstätt	1166	1350							184
Einsiedeln	934	1798	1803	2007					1068
Elchingen	1120	1802							682
Ellwangen	764	1460							696
Engelberg	1100	2007							907
Ensdorf	1121	1525	1695	1802					511

Abbey	Year established	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Lifetime
Erlach	1100	1528							428
Ettal	1332	1803	1907	2007					571
Ettenheimmünster	800	1803							1003
Faurndau	800	1120							320
Feuchtwangen	800	1004							204
Fischingen	1138	1531	1540	1848					701
Frauenzell	1424	1522	1582	1803					319
Fultenbach	739	1449	1471	1773					1012
Füssen	750	1802							1052
Gengenbach	740	1807							1067
Gottesau	1080	1527	1630	1648					465
Heidenheim	752	1537							785
Herrieden	790	888							98
Hirsau	830	1000	1065	1560	1630	1648			683
Honau	730	1000							270
Immünster	762	1060							298
Irsee	1186	1802							616
Isny	1096	1350	1362	1803					695
Jonschwil	850	950							100
Kastl	1102	1563							461
Kempten	752	1803							1051
Komburg	1078	1488							410
Konstanz (Schott.)	1100	1529							429
Luzern	740	820	850	1000					230
Lorch	1100	1563	1630	1648					481
Mallersdorf	1109	1803							694
Marienberg	1090	1808	1816	2007					909
Memmingen	1167	1435	1483	1498					283
Metten	766	950	1157	1803	1840	2007			997
Michelfeld	1119	1556	1695	1803					545
Michelsberg	1015	1803							788
Mönchröden	1147	1525							378
Mönchsdeggingen	950	1802							852

Abbey	Year established	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Lifetime
Moosburg	750	1027							277
Mosbach	770	1010							240
Münchaurach	1126	1525							399
München St.Bonifaz	1850	2007							157
Münchsmünster	750	950	1130	1554					624
Münchsteinach	1133	1529							396
Münsterschwarzach	815	1803	1914	1941	1945	2007			1077
Muri	1065	1841	1846	2007					937
Murrhardt	800	1552	1634	1648					766
Neresheim	1120	1802	1920	2007					769
Neuburg	1928	2007							79
Neustadt am Main	768	1803							1035
Niederaltaich	741	1803	1930	2007					1139
Nürnberg Schottenkloster	1140	1525							385
Oberaltaich	1100	1803							703
Ochsenhausen	1392	1803							411
Odenheim	1110	1503							393
Ottobeuren	764	1802	1920	2007					1125
Petershausen	993	1530	1556	1802					783
Pfäfers	750	1838							1088
Plankstetten	1129	1806	1917	2007					767
Prüfening	1109	1803							694
Prüll	997	1485							488
Regensburg St.Emmeram	739	1812							1073
Regensburg St. Jakob	1089	1862							773
Reichenau	724	1540							816
Reichenbach	1118	1556	1659	1803					582
Rheinau	780	1799	1803	1862					1078
Rohr	1946	2007							61
Rott am Inn	1083	1803							720
Schaffhausen	1060	1524							464
Schäftlarn	762	930	1910	2007					265
Scheyern	1095	1803	1842	2007					873

Abbey	Year established	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Lifetime
Schienen	800	909							109
Schlehdorf	740	1100							360
Schliersee	779	900							121
Schuttern	750	1806							1056
Schwarzach	749	1000	1124	1588	1590	1803			928
Schweiklberg	1914	1941	1945	2007					89
Seeon	994	1803							809
Sinsheim	1095	1496							401
Staffelsee	738	810							72
St. Blasien	1000	1806							806
Stein am Rhein	970	1581							611
St. Gall	719	1805							1086
St. Georgen	1083	1806							723
St. Johann	1100	1555							455
St. Ottilien	1893	1941	1945	2007					110
St. Peter im Schwarzwald	1093	1806							713
St. Trudpert	850	1806							956
St. Veit bei Neumarkt	1121	1802							681
Tegernbach	750	900							150
Tegernsee	750	1803							1053
Theres	1045	1802							757
Thierhaupten	750	900	1028	1452	1500	1803			877
Trub	1139	1528							389
Vornbach	1094	1803							709
Wagenhusen	1119	1417							298
Weihenstephan	1021	1803							782
Weingarten	740	1802	1922	1940	1946	2007			1141
Weissenhohe	1053	1554	1695	1803					609
Weltenburg	700	900	1000	1123	1128	1803	1913	2007	1092
Wessobrunn	750	900	1065	1323	1340	1803			871
Wiblingen	1093	1806							713
Wiesensteig	861	1100							239
Wülzburg	1050	1523							473

Abbey	Year established	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Lifetime
Würzburg St. Burkard 748	748	900	983	1464					633
W. Schottenkloster	1134	1497	1504	1547	1595	1763			574
W. St. Stephan	1057	1803							746
Zwiefalten	1091	1802							711

**Appendix III: Average lifetime of the abbeys, ignoring the period until 1000 AD and momentary closures and Refoundations.
Re-installations after complete shut downs, counted as separate organizations. Systematization of the reasons for closure.**

Abbey	Year established	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Lifetime 1. Period	Lifetime 2. Period	Lifetime 3. Period	Reason for closure	
Alpirsbach	1095	1535					440	0	0		1
Amorbach	1000	1803					803	0	0		1
Andechs	1455	1570	1588	1803			115	215	0	3	1
Anhausen	1113	1558					445	0	0		1
Asbach	1139	1803					664	0	0		1
Attel	1145	1803					658	0	0		1
Augsburg St.Stephan	1834	2007					173	0	0		2
Augsburg St.Ulrich and Afra	1012	1537	1548	1802			525	254	0	1	1
Auhausen	1100	1534					434	0	0		1
Aura an der Saale	1113	1564					451	0	0		3
Bad Wimpfen	1947	2007					60	0	0		2
Banz	1060	1568	1574	1803			508	229	0	3	1
Benediktbeuren	1000	1803					803	0	0		1
Beinwil-Mariastein	1100	1554	1633	2007			454	374	0	1	2
Beuron	1868	2007					139	0	0		2
Biburg	1133	1554					421	0	0		3
Blaubeuren	1085	1562					477	0	0		1
Disentis	1000	2007					1007	0	0		2
Donauwörth	1110	1803					693	0	0		1
Ebersberg	1013	1590					577	0	0		3
Echenbrunn	1120	1445	1460	1557			325	97	0	3	1
Eichstätt	1166	1350					184	0	0		3
Einsiedeln	1000	2007					1007	0	0		2
Elchingen	1120	1802					682	0	0		1
Ellwangen	1000	1460					460	0	0		4
Engelberg	1100	2007					907	0	0		2
Ensdorf	1121	1525	1695	1802			404	107	0	3	1

Abbey	Year established	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Lifetime 1. Period	Lifetime 2. Period	Lifetime 3. Period	Reason of closing
Erlach	1100	1528					428	0	0	1
Ettal	1332	1803	1907	2007			471	100	0	1 2
Ettenheimmünster	1000	1803					803	0	0	1
Faurndau	1000	1120					120	0	0	4
Fischingen	1138	1531	1540	1848			393	308	0	1 1
Frauenzell	1424	1522	1582	1803			98	221	0	3 1
Fultenbach	1000	1449	1471	1773			449	302	0	5 5
Füssen	1000	1802					802	0	0	1
Gengenbach	1000	1807					807	0	0	1
Gottesau	1080	1527					447	0	0	1
Heidenheim	1000	1537					537	0	0	6
Hirsau	1065	1560					495	0	0	1
Ilmünster	1000	1060					60	0	0	4
Irsee	1186	1802					616	0	0	1
Isny	1096	1350	1362	1803			254	441	0	1 1
Kastl	1102	1563					461	0	0	6
Kempten	1000	1803					803	0	0	1
Komburg	1078	1488					410	0	0	4
Konstanz (Schott.)	1100	1529					429	0	0	3
Lorch	1100	1563					463	0	0	1
Mallersdorf	1109	1803					694	0	0	1
Marienberg	1090	2007					917	0	0	2
Memmingen	1167	1435	1483	1498			268	15	0	3 5
Metten	1157	1803	1840	2007			646	167	0	1 2
Michelfeld	1119	1556	1695	1803			437	108	0	1 1
Michelsberg	1015	1803					788	0	0	1
Mönchröden	1147	1525					378	0	0	1
Mönchsdeggingen	1000	1802					802	0	0	1
Münchaurach	1126	1525					399	0	0	1
München St.Bonifaz	1850	2007					157	0	0	2
Münchsmünster	1130	1554					424	0	0	3
Münchsteinach	1133	1529					396	0	0	1

Abbey	Year established	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Lifetime 1. Period	Lifetime 2. Period	Lifetime 3. Period	Reason of closing	
Münsterschwarzach	1000	1803	1914	2007			803	93	0	1	2
Muri	1065	2007					942	0	0	2	
Murrhardt	1000	1552					552	0	0	1	
Neresheim	1120	1802	1920	2007			682	87	0	1	2
Neuburg	1928	2007					79	0	0	2	
Neustadt am Main	1000	1803					803	0	0	1	
Niederaltaich	1000	1803	1930	2007			803	77	0	1	2
Nürnberg											
Schottenkloster	1140	1525					385	0	0	6	
Oberaltaich	1100	1803					703	0	0	1	
Ochsenhausen	1392	1803					411	0	0	1	
Odenheim	1110	1503					393	0	0	4	
Ottobeuren	1000	1802	1920	2007			802	87	0	1	2
Petershausen	993	1530	1556	1802			537	246	0	1	1
Pfäfers	1000	1838					838	0	0	6 (1)	
Plankstetten	1129	1806	1917	2007			677	90	0	1	2
Prüfening	1109	1803					694	0	0	1	
Prüll	1000	1485					485	0	0	5 (2)	
Regensburg											
St.Emmeram	1000	1812					812	0	0	1	
Regensburg St. Jakob	1089	1862					773	0	0	3	
Reichenau	1000	1540					540	0	0	5	
Reichenbach	1118	1556	1659	1803			438	144	0	6	1
Rheinau	1000	1862					862	0	0	1	
Rohr	1946	2007					61	0	0	2	
Rott am Inn	1083	1803					720	0	0	1	
Schaffhausen	1060	1524					464	0	0	4	
Schäftlarn	1910	2007					97	0	0	2	
Scheyern	1095	1803	1842	2007			708	165	0	1	2
Schlehdorf	1000	1100					100	0	0	4	
Schuttern	1000	1806					806	0	0	1	
Schwarzach	1124	1588	1590	1803			464	213	0	3	1
Schweiklberg	1914	2007					93	0	0	2	

Abbey	Year established	Closure or still in existence	Refoundation	Closure or still in existence	Refoundation	Closure or still in existence	Lifetime 1. Period	Lifetime 2. Period	Lifetime 3. Period	Reason of closing	
Seeon	1000	1803					803	0	0	1	
Sinsheim	1095	1496					401	0	0	4	
St. Blasien	1000	1806					806	0	0	1	
Stein am Rhein	1000	1581					581	0	0	6 (3)	
St. Gall	1000	1805					805	0	0	3	
St. Georgen	1083	1806					723	0	0	1	
St. Johann	1100	1555					455	0	0	5	
St. Ottilien	1893	2007					114	0	0	2	
St. Peter im Schwarzwald	1093	1806					713	0	0	1	
St. Trudpert	1000	1806					806	0	0	1	
St. Veit bei Neumarkt	1121	1802					681	0	0	1	
Tegernsee	1000	1803					803	0	0	1	
Theres	1045	1802					757	0	0	1	
Thierhaupten	1028	1452	1500	1803			424	303	0	3	1
Trub	1139	1528					389	0	0	1	
Vornbach	1094	1803					709	0	0	1	
Wagenhusen	1119	1417					298	0	0	5	
Weihenstephan	1021	1803					782	0	0	1	
Weingarten	1000	1802	1922	2007			802	85	0	1	2
Weissenhohe	1053	1554	1695	1803			501	108	0	3	1
Weltenburg	1000	1123	1128	1803	1913	2007	123	675	94	5	1 2
Wessobrunn	1065	1323	1340	1803			258	463	0	5	1
Wiblingen	1093	1806					713	0	0	1	
Wiesensteig	1000	1100					100	0	0	4	
Wülzburg	1050	1523					473	0	0	4	
Würzburg St. Burkard	1000	1464					464	0	0	4	
W. Schottenkloster	1134	1497	1504	1547	1595	1763	363	43	168	3	3 4
W. St. Stephan	1057	1803					746	0	0	1	
Zwiefalten	1091	1802					711	0	0	1	

Legend: 1 = External institutional factors, 2 = No closing, 3 = Mismanagement, 4 = Change into other organizational form, 5 = Control failure, 6 = Voluntary closing

Appendix IV: Average lifetime of the collegiate chapters (years)

	Year established	Closure	Lifetime
Ansbach	1000	1563	563
Ellwangen	1460	1802	342
Faurndau	1120	1536	416
Hirsau	1000	1065	65
Honau	1000	1398	398
Illmünster	1060	1493	433
Komburg	1488	1802	314
Moosburg	1027	1598	571
Mosbach	1010	1556	546
Odenheim	1503	1803	300
Schaffhausen	1524	1529	5
Schlehdorf	1100	1140	40
Schliersee	1141	1803	662
Sinsheim	1496	1565	69
Wiesensteig	1100	1803	703
Wülzburg	1523	1537	14
Würzburg St.Burkard	1464	1803	339