LUND UNIVERSITY
School of Economics and Management

Master in Economic History

"…and they lived happily ever after"?

Commercial Retirement in an Early Modern Hospital in Regensburg, 1649-1809

J. Ludwig Pelzl

jo4358pe-S@student.lu.se

Abstract: The way how retirement is organized in a society is linked to multiple basic social processes such as the evolution of family ties, migration or inheritance. Intra-familial care and charity dominate our view of retirement in the pre-industrial past, while commercial arrangements hardly play a role. This thesis delivers a case study on how the commercial retirement home of St. Catherine's Hospital in Regensburg worked in the early modern period (1649 to 1809), utilizing a brand-new archival dataset. The relative cost of retirement changed much over time, rising steeply in the 18th century after a long period of very affordable prices in the 17th century, partly due to macro-economic developments. The institution's retirees were overproportionally single or widowed women, had a migration history and came mostly from middle and lower classes. Based on daily calory intake they there enjoyed a well-above average living standard. We find that some personal aspects such as sex, confession and age mattered much in the pricing, while others like income did not. There is much evidence that St. Catherine's underpriced its retirement offers.

Key words: early modern period, commercial retirement, old age provision, hospital, Regensburg

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1 Introduction: Undeshagen's Fateful Choice

It had certainly been a hard decision for Joseph Balthasar Undeshagen, but he had finally come to the conclusion that he wanted to leave St. Catherine's Hospital (SpAR Kasten VI Fach 3 Fasz. 8). In late August of 1777 he approached a hospital official and confronted him with his desire to quit and be repaid the entrance fee he had paid when entering one and a half years before. Aged 66, after what had probably been a hard working life as a rifleman at the city watch of Stadtamhof, he had decided to retire and spend his last years at St. Catherine's Hospital in Regensburg which must have seemed to him as an attractive insurance against the risks of old age. For lifelong provision of food, a bed and potential care if he grew too frail he had been able to scratch up the handsome sum of 170 guilders, an amount of money he could have surely lived on outside for four to five years. Undeshagen had in absence or rejection of other options purchased a corrody, a commercial retirement arrangement, attracted by the prospect of his last years without material hardship. Although a decent living standard was guaranteed, he had envisioned his own retirement quite differently.

As he pointed further out to the official, he had come to St. Catherine's expecting to enjoy the deserved rest after a busy working life and did not want to contribute to the daily maintenance works all inmates were asked to help with. Undeshagen's was certainly a very uncommon request for the official, as in the preceding 20 years not even a dozen corrodians had left the institution voluntarily. The willingness of many prospective inmates to wait years for the next opening spot documents how high demand was and how coveted spots were. The official simply replied to Undershagen that such a consequential decision could not be made right now and he should go sleep one night over his plan. It is indeed surprising that Undeshagen had apparently been unaware of the duties corrodians had to carry out on a regular basis, since his former barracks were just five houses down the street and the very customs station the soldiers manned was a stone's throw away from the hospital. He must have encountered some of the around 40 corrodians regularly and it could have hardly escaped him that they had to lend a hand with daily works.

The next morning, Undeshagen was back and as convinced to leave St. Catherine's as the day before. The hospital official tried again to talk him out of exiting the hospital by showcasing to him how advantageous being provided for at St. Catherine's was in Undeshagen's situation. He told him to think of his age, implying that his days as a self-sufficient individual were numbered. Could Undeshagen imagine a place where he could spend his old days "in better satisfaction" than at St. Catherine's? Should he leave, he would come to regret this decision one day. Undeshagen instead claimed he would like to move in with a Lieutenant Sigard who might have been a former colleague of his. Probably anticipating that Undeshagen was making an irresponsible choice for his age and state of health, the hospital's officials conceded to exempt him from certain types of work, but failed to change the old man's mind. Only with a repayment of 145 guilders in his pocket, Undeshagen left St. Catherine's in early 1778 into what was most likely a very uncertain future.

The question of the commercial retirement was not just one of individual well-being in old age such as for Undeshagen, the literature has suggested that the availability of commercial retirement solutions has a strong impact on social relations (Zuijderduijn 2014; 2015): In its essence, it is theorized that the availability of commercial retirement - at least to certain social strata - rendered elderly people much more independent from family, because they would no longer necessarily depend on it for care in old age. More generally, the organization of old-age provision is a good proxy for familial solidarity and the development of family ties (Reher 1998). Firstly, it lowered the need of high family cohesion, because the personal hardships of

old age could be dealt with by other means. This was intricately linked and mutually reinforcing with the restructuring of family size, marriage pattern and fertility regime in early modern Europe. This too affected inheritance - or more generally societal wealth distribution - patterns. Lambrecht (2013, p. 207) finds that "[m]aterial interests, much more than emotions, determined the extent and level of solidarity between generations." With the older generation's dependence lowered, one could expect that inheritance was less affluent and the money was spent or invested otherwise, if it was not needed for retirement. At the same time the young generation's resources were not drained by remittances or direct care. From a theoretical standpoint, it should have led to a renegotiation of the inter-generational contract in the families affected. Lastly, it could have considerably fostered geographical mobility, thus facilitating the increasing urbanization of early modern Europe. The geographical distance rendered the proximity of close kin, i.e. potential caretakers, unlikely. An endogenous relationship can be assumed, as, in turn, less mobile older people could in cities turn to such arrangements, when the young had moved elsewhere. This is important, as the paramount role of urbanization as both, driver or proxy, for early modern economic growth has often been theorized and documented (Acemoglu et al., 2002; de Pleijt & van Zanden, 2016).

In spite of these promising theoretical propositions commercial retirement constitutes a broader lacuna in the literature on old-age care in early modern history: Our view of it is still very much dominated by either intra-familial care or charitable hand-outs, giving the research a rather strong social- and mentality-historical focus. For a long time the sale of corrodies resp. corrodians have only been treated as a subcategory of general research on hospitals (see for example Pohl-Resl 1998; Zeller 1952; Gerstmaier 1993). It has consequently been dominated by anecdotal recounts of scattered sources rather than systematic and conceptually refined studies. Only slowly a strand of literature is evolving which particularly targets the sale of corrodies – just what our unlucky Undeshagen did – under the aspect of an insurance against the risks of old age such as poverty due to decreasing income, bad health due to abating forces, and care dependency (Zuijderduijn 2014, 2015; Bell & Sutcliffe 2010). However, especially for questions of economic history we lack neatly source-based contributions which are able to deliver reliable long-term perspectives on corrody prices and socio-economic factors of demand (with the exception of Zuijderduijn 2014). This is right where this thesis steps in: We have digitized an abundant dataset on St. Catherine's Hospital in the South German city of Regensburg which has never been evaluated for such purposes before. Its wealth of information – it contains amongst others large-scale data on geographical origin, occupational status or age of the corrodians – is almost unparalleled and will enable us to inquire early modern corrody business with unprecedented precision. Doing that, three guiding questions will be addressed:

1. Who were the people who entered St. Catherine's Hospital seeking insurance against the risk of old age? What was their demographic, geographical and socio-economic background?
2. How was the sale of corrodies operated economically and how did corrodians live materially at the hospital?
3. How did the corrody prices evolve over the 161 years of observation? Which time-invariant and time-variant factors impacted the pricing of corrodies?

For this purpose the thesis will proceed in the following manner: Chapter 3 will contain an economic historical overview over the German-speaking literature, the first to be compiled in 40 years. It will collect theoretical input for all major points of the empirical analysis, such as pricing factors, the economic philosophy of hospitals as well as a historiographical overview. In light of vast inter-institutional diversity, chapter 4 will in the first step introduce St. Cathe-

rine's Hospital since firm knowledge of the hospital is essential to comprehend its corrody policies. In a second step we approach the corrodians' life, pointing out the admission procedure and estimating their material living standard, based on diet plans. As an interlude, in chapter 5 the primary dataset as well as auxiliary data on currecy conversion rates, wages and Consumer Price Indices are presented which will later serve to contextualize the corrody prices. The centerpiece of the work is the data analysis in chapter 6. It firstly inquires and presents the demographic, geographical and social background of the roughly 900 corrodians. Later it traces and compares the corrody price development, triangulating it with wages and costs of living. It provides a rough estimate for the profitability of corrodies and describes corrody price developments by certain groups, such as age cohorts, confessions or social status. The concluding chapter 7 concisely recounts the most important findings and names research desiderata.

2 Contribution

This thesis will examine economic and social historical aspects of commercial retirement arrangements in the early modern epoch on th basis of the example of St. Catherine's Hospital in Regensburg in Southeast Germany from 1649 to 1809. This will add a conceptually refined qualitative case study to the nascent research literature on corrodies as a tool to insure elderly people against the risks of their age in early modern Europe.

The primary contribution of the thesis will be the application of a new, very rich dataset which has been digitized by the author and is used for the first time for the study of corrodians under the aspect of economic history. It merges detailed information on personal characteristics with long-run time-series on the prices of a corrody. This helps this thesis put the finger right at the sore spot of existing literature on hospital and corrodian research: Much of the research on corrodians relies on anecdotal evidence from fragmented and scattered sources and presents the corrodian business in an unsystematic and uncontextualized manner. The Regensburg dataset offers the opportunity to empirically test these propositions for one case, by showing for how much and to whom corrodies were sold at St. Catherine's Hospital over the period of observation. For this purpose the first synoptic revision of the theory and previous literature on corrodies in German language for 40 years was conducted (see Dirlmeier 1978 for reference).

The corrodians will be systematically investigated based on their age, sex, marital status, confession, longevity as well as geographical and occupational background. Having analyzed the corrodians' diet plans, an estimate of material living standard in daily calory intake will be provided. The development of the entrance fees will be triangulated with contemporary data on wages and Consumer Price Index to understand what were the determinants of corrody prices and to evaluate the responsiveness of the admission practice to socioeconomic environment factors. Prices for different groups of age, sex, confession and income will be compared to understand which personal factors played a role for pricing. In addition, an estimate of a corrody's profitability will be presented.

3 Previous Research and Theory

In the last 40 years no economic historical German-speaking overview of the sale of corrodies and the living conditions of corrodians at hospitals has been published to the author's knowledge. Even Dirlmeier (1978) was primarily concerned with the assessment of living standards and the cost of living which he consulted late Medieval corrody prices for. Since then the extent of the literature on hospitals has grown much and become more conceptually

refined, potent input from studies from England and the Netherlands has enriched our perspective on corrodies (Bell & Sutcliffe 2010; Zuijderduijn 2014, 2015). The aim of the ensuing chapter is to give a systematic economic and social historical overview over the German-speaking literature on corrodies and corrodians.

3.1 Historiographical Overview

In the German-speaking lands the research on corrodies takes place to a large degree within the studies on hospitals, and to a much lesser degrees within the studies on monasteries. There is to the author's knowledge no significant research on corrody-selling institutions which do not fall under one of the above two definitions. If this is because there were no such institutions or they have fallen through the cracks must remain open. Corrodies resp. corrodians, have, however, featured prominently since the hospital research reached recognized academic standard in the 1920s. Among the legal historical studies Reicke (1932a, 1932b), who served as a point of reference for more than one generation of German hospital historians, touched upon the legal status of a corrodian and his belongings towards the hospital (Drossbach 2007, 9). His thesis of the inherent relation between the communal and civic takeover of hospitals and the increasing corrodization from the 13th century onwards is still with out major qualifications accepted.

Towards the middle of the 20th century the single-institution-monography and publications of urban poor relief system, including hospitals, spread, shaping the very institution-centered approach towards hospitals until now. In the 1960s economic historical and sometime later social historical perspectives became en vogue, producing the first in-depth and neatly source-based accounts of the the sale of corrodies resp. corrodians. Thanks to the fact that the sale of a corrody was customarily codified in a contract and the hospitals kept those in their recordings much longer than the corrodian lived, social historians could rejoice about the group of hospital inmates represented best in the sources (Lambacher 1991, 123; Kleiminger 1962, 26). About the needy or administrative personnel similarly rich sources were and are unavailable. This automatically turned the attention of social historians to corrodians for the prosopographical part of their work. This bestowed us with monographs about quite a few German or Austrian municipal hospitals which mostly deliver a rich pool of anecdotal evidence on the living conditions of corrodians and sale of corrodies, based on source critique of hospital regulations, administrative records and corrody contracts (see for example Schürle 1970; Zeller 1952; Berweck 1963; Gerstmeier 1993). From the mid-1980s onwards these works grew conceptually more refined and adopted a broader focus than just social history, often adding a good dose of every day history (Aderbauer 1996; Boldt 1988; Lambacher 1991; Besold-Backmund 1986; Reddig 1998). The latest evolution was the conceptual secession from the institution as a whole and an explicit focus on corrodians (Holzwart-Schäfter 2005; Neumaier 2011). This delectable trend resulted in a recent collective volume on corrodians (Dirmeier 2018) which promises to be of great benefit.

Economic historical works, emerging in the 1960s, initially dealt with the narrow, but challenging question of how the hospital's budget functioned. Combing through the account books, they unsurprisingly hit on revenue from the sale of corrodies, too (see for example Heimpel 1966; Militzer 1965; Haug 1965; Knefelkamp 1989b). Generally, revenue from corrodies featured as a subitem in the budget below much larger issues such as land rents or foundations and was given according attention. Heimpel (1966, 54) understood corrodies as an independent economic strategy and attempted calculations on their profitability. Only Dirlmeier (1978) stands out of this: In his extensive, explicitly comparative study on living standards in the late Middle Ages he uses corrodies as a means to compare the price of corrodies to the cost of living as well as to understand late medieval income distribution through the sale of corrodies. His is the most important German language contribution so far. More

recent economic historical work has improved conceptually and broadened the economic historical questions (Aspelmeier 2009). In addition, the division has been blurred and works combine both aspects (Reddig 1998; Pohl-Resl 1996). The disparity of the economic and social historical approaches as well as the institutionalist entrenchment in the context of which corrodies and the sale of corrodians have been investigated appear to have somehow inhibited the arisal of a more unified analysis of corrodies.

The temporal focus of the works gravitates towards the late Middle Ages and the 16th century, the 17th and 18th century are less prominent. Hospitals are, it can be explained, somewhat more visible in terms of relative source availability for the Middle Ages than later. Even if longer time frames of a century or two are covered, the analytical approach is often rather static and refuses to draw a time-dynamic and evolutionary picture of hospitals. This has resulted for example in the near complete ignorance of time-variant macroeconomic factors in the pricing of corrodies in German-speaking research. A notable exception is Matheus (2005) collective volume, which outspokenly addresses structural and functional change of hospitals, reexamining the trajectory of high and late Medieval corrodization (see also Pauly 2005; Stunz 2005). In terms of geographical distribution South Germany, where urban culture prospered first, is overrepresented in corrodian research (Jankrift 2008). Recent laudable (European) comparative designs (Drossbach et al. 2007) in general hospital research have unluckily not yet fertilized corrodian research.

3.2 Definition of Corrody

Hermann (2018, 12) notes that at its very core of the concept denotes a judicial relationship from which an entitlement to receive benefits is deduced on a somewhat regular basis. Bell/Sutcliffe (2010, 142-143) define "Under a corrody, an individual or couple was provided by a religious institution such as a monastery, priory, abbey or hospital with some agreed mixture of food, drink, heat, light, accommodation, clothing, laundry, health care, maybe a small monetary allowance and even stabling and grazing for their livestock." It is only to be added that in the early modern period not only religious institutions offered corrodies, in fact the arisal of corrodies in Germany is often linked to the municipal take-over of religious institutions in the high Middle Ages (Reicke 1932b, 187). A corrody could entail a very specific basket of services, depending on the endowment of the hospital, the needs and the wallet of the buyer. In the German literature there seems to be an implicit consensus that to be considered a "Spitalspfründner" the basket of a corrodian had at least to consist of food as well as some type of accommodation. Grimm's Wörterbuch notes for the first half of the 19th century "spitalpfründe, das heiszt, kost und freie wohnung auf lebenslang"[1] (Grimm & Grimm 1838). We know, however, that there were exceptions to this rule. The contemporary usage of the "Pfründe"[2] was, however, more loose. At St. Catherine's even recipients of gratuitous poor relief were referred to as "dry corrodians" (SpAR Kasten VII, Fach 1, Fasz. 18). The reception of any kind of service seems to have been a sufficient definiton criterion, at least in Regensburg (even if a distinction through the adjective "real" resp. "dry" was deemed necessary).

The reasons why a corrody was granted could, however, vary greatly between economic, political and charitable motivations. A corrody could be unilaterally imposed by higher authorities such as the crown in order to provide for a loyal person (Tillotson 1974) or be granted out of caritas. It could be used as a non-wage compensation for workers of the institution, as some

[1] This roughly translates to English as "Hospital corrody"
[2] In Middle Low German, spoken in the Northern territories of the Holy Roman Empire, also the expression "Prövner" was used instead of Pfründner (see for example Kleiminger 1962 about Wismar).

kind of proto-occupational pension scheme or simply to reward elderly servants. Bell & Sutcliffe (2010) name different reasons for provision of which some are very similar. In fact, these motivations could mingle for one corrodian and within the same institution. Herman (2018, 16) contends that it remains terminologically unclear whether a corrody was granted against or without compensation since the first evidence for "Pfründenkauf" (purchase of corrody) is only seizable in the mid-17th century when the practice of sale had long been established. That the commercial acquisition was common shows a look into an 18th century encyclopedia. Johann Georg Krünitz' "Oeconomische Encyclopädie" of 1773 makes two distinctions for the German equivalent "Pfründe". One is for clergymen who obtained rents from a religious entity in exchange for their religious duties. Secondly, the commercial type of corrody is explained: "Exactly this name [Pfründe] is given to a spot in a hospital or in a similar foundation, which one receives through purchase or else, in respect to the sustenation which the former grants to him […]." (Krünitz 1773) The terms Laienpfründe or Spitalpfründe are sometimes used to make further distinctions. In the following corrody, if not specified otherwise, will presuppose commercial acquisition, reference to a hospital and consistence of at least food and on-site accommodation.

3.3 Insurance against the Risks of Old Age through Corrodies

Early modern societies were – unlike today – essentially societies of self-help (Dinges 1991, 11). People had to rely on their capital, be it social or economic, to weather crises and take measures for bad times. Even if we know much more about poor relief by the authorities, this came to aid only a rather small portion of those in need. Thus, it is only reasonable to assume that people had a strong incentive to craft their own strategies well in advance to ensure their own material living standard in the future. Borscheid (1983, 218) points to a powerful psychological nexus of provision for bad times: "In pre-industrial society people had, as a consequence of the daily struggle for bread and food and the latent fear of starvation, attached high attention to questions of material situation, and the worries over money and livelihood had influcened the behavior of people and in particular old people.".

This was true for old age as well as other crises of material living standard throughout the lifecycle. Old age, however, has particular features: It was inevitable and thus, foreseeable. It was a long-term state of need which could not be just weathered by cutting back consumption temporarily, unlike a seasonal hunger crisis, and had to be provided for in advance, as the physical and social means to compensate for shortages in provision during old age were very limited. In addition, it cut through all classes putting even people at risk who possessed the cognitive and financial tools to effectively plan for such circumstances. We can thus assume that certain social groups started to devise ways to sustain themselves in old age already during their working lives. Pohl-Resl (1996, 97) notes that for the Viennese Bürgerspital corrodies were purchased many years before they were intended to be made use of. Even if notions of retirement were culturally different – the work duties which drove Undeshagen out of St. Catherine's document that –, a substantial time period between the end of work and death existed (Borscheid 1983, 236).

Of course, this self-help could assume different forms, it could be provided via the social capital acquired in families and communities, but, if the former were unavailable or undesirable as possibly in case of migration, nuclear family structures or premature death of kin (Zuijderduijn 2015), self-help could also be arranged via the market. Even if our knowledge on the informal and formal strategies of old age provision in the late Medieval and early modern period is rather limited, yet we know that not only one commercial option existed. Signori shows how in 15th century-Basel the elderly acquired so called "Notpfründen" which allowed them to receive accommodation, food and some form of care while staying with private people against a previous payment (Signori 2004, 2012). She notes that into these contractual

agreements not the destitute entered, but elderly who retained at least some form of possession and rather anticipated economic hardship than experienced it. It is disputed whether such arrangements were more expensive than hospital corrodies (Signori 2004; Dirlmeier 1978). "Ausgedinge" were contracts based on the notion of intra-generational material reciprocity, not strictly commercial though. The older generation would pass a workshop or a farm to the younger who in turn obliged itself contractually to sustain the older (Held 1983). In so called Witwenkassen small groups of upper middle class men could found a fond on the basis of regular contributions and gains from interest rates would then support the widows of former contributors (Kröger 2006, 650). Elderly willing to provide for old age could also insure themselves against material poverty by receiving lifelong annuities in cash which were paid after a one-time transfer of property. Some hospitals were engaged in such Leibrenten or Leibgeding-business (Pohl-Resl 1997, 162; Schulz 1993, 51; Ogris 1961). Leibrenten are akin to corrodies, bringing along with them a higher market risk yet. An advantage of big institutional players like hospitals was that given their institutional longevity a default on corrodies must have seemed very unlikely to applicants (Bell & Sutcliffe 2010, 147).

There is wide consensus that corrodies in hospitals were used as a form of old age insurance[3] against the risks which tended to cluster in old age such as poverty due to lack of steady income, disease and frailty due to the natural process of deterioration of personal health (Pohl-Resl 1996, 98; Ohngemach 2008, 271; Boldt 1988, 167; Bell & Sutcliffe 2010, 143; Schürle 1970, 69; Reddig 1998, 188). Indicatively, Grimm's German Dictionary lists "altetheil", roughly translatable as old age provision, as one of the (less important) meanings of the word Pfründe (Grimm & Grimm 1838). The way how the hospital official attempted to talk Joseph Balthasar Undeshagen out of exiting St. Catherine's in the introduction, the explicit reference to the risks of old age, corroborates that contemporaries were very well aware of the insurance function of a corrody. Without forestalling results presented below, the average entrance age at St. Catherine's strongly indicates the same. Dirlmeier (1978, 527-8) comments "Own capital was the only way to independent old age provision in the Middle Ages and a corrody (in a hospital, monastery or privately) was not only an important form of old age provision, but also, as far as one can see, the only possibility to secure oneself independently in old age and disease and maintain a standard of living without charity, intra-familal care and loss of property. "

3.4 Social Composition and Status Differentiation

As hospitals were – especially in smaller cities where specialization was not well developed – multi-functional insitutions, it seems to have been the rule rather than the exception that hospitals offered different types of corrodies, often two or three (Boldt 1988, 149; Dirlmeier 1978, 462; Reddig 1998, 189). Bigger institutions could most likely afford different types as they possessed the means and space to provide different types of diet and accommodation (Aspelmeier 2009, 101). The naming could, of course, differ, but a two- or tripartite system[4] consisting of "Herren-" or "Reichenpfründe", "Mittelpfründe" and "Armen-" or Siechenpfründe" seems to have been widespread (Ohngemach 2008, 279; Dirlmeier 1978, 527; Aspelmeier 2009, 99; Hatje 2008, 325). The denominations "rich" or "poor" are not meant to be understood in absolute terms, but are relative to eachother. Thus, in this idealtypical vision a "Armenpfründe", a poor man's corrody presupposed a regular income, which had enabled some form of saving and applicants could hardly have been completely destitute

[3] In some exceptional cases, some hospital corrodies were purchased to provide care to people who were from a rather yound age or even birth on suffering from disease or disability and had the luck to have kin who could afford a spot at a hospital.

[4] In Esslingen, for example, other categories existed either, aimed at former servants or corrodians living outside the hospital and receiving only food (Haug 1965, 70).

(Dirlmeier 1978, 526). Accordingly, a rich corrodian was not among society's most rich who certainly did not have to rely on hospitals for old age care, but a comparatively more affluent type of corrody. Thus, the corrodians would have roughly come from different subdivisions of urban middle classes. The relative positions of the corrodies to eachother varied from hospital to hospital. It is a very important open question, how gratuitous corrodies are to be placed in this scheme. Haug narrates for Esslingen that poor man's corrodies, although they had to be purchased were rather close to the poor relief provided by the hospital (Haug 1965, 67). The well developed internal differentiation indicates that social differences outside translated through the entrance fee into the interior of the hospital (Dirlmeier 1978, 527). The differences between the types of corrodies could be quite pronounced: For the year of 1565 the Nurembergian scribe Peter Probst estimated that a rich corrody would cost the hospital 200% of a poor man's corrody and still some 150% of a mediocre corrody (Knefelkamp 1989a, 220). Dirlmeier (1978, 489) estimates that in the early 16th century a poor man's corrody (for a single person) would cost up to 50 guilders, a medium corrody up to 100 guilders and a rich man's corrody from 100 to more than 200 guilders in South German cities.

As the most common instruments of social distinction within the hospital we find differences in housing, diet as well as exemptions from labor duties (Lambacher 1991, 127; Knefelkamp 1989a, 218; Kühne 2006, 55). If the facility allowed for it, a set of different chambers was available which differed in space, privacy and other factors. At St. Catherine's in the biggest hall where during daytime meals were served, 16 corridans slept, most of the other rooms accommodated between four and six inmates (Neumaier 2011, 264). The rooms were strictly separated by sex and confession. This compartmentalization was as much owed to architectural conditions as much as they were an instrument to differentiate between the corrodians on the basis of the entrance fee they had paid. We know of cases when corrodians conditionalized their entrance fee on the possibility to live in a single-room or to stay with their spouse (Neumaier 2011, 202). Meals, for example, would be served at two different tables where poor corrodians had to eat with the hospital's workers while the rich corrodians dined side by side with the upper officials (Lambacher 1991, 123; Aspelmeier 2009, 100; Reddig 1998, 189). Customarily, the corrodians' belonging fell to the hospital (if no other arrangements had been agreed on upon admission), the degree to which corrodians could still wield influence over their possessions varied from hospital to hospital (Reicke 1932b, 212; Neumaier 2011, 322). In some institutions corrodians were just forbidden to bequest or donate their money, but could use it for all other purposes as they pleased (Lambacher 1991, 120). Elsewhere, the hospital's officials factually controlled their inmates' assets. In case funds were still available, other forms of distinctions are, of course, very plausible. A particularly popular clause in the corrody contracts addresses the need of care: Some corrodians wished a private ancilla to be hired who would take care of them (Lambacher 1991, 126; Besold-Backmund 1986, 247; Knefelkamp 1989a, 218). Thus, life within the hospital's walls mirrored to a certain extent the socially stratified world outside.

There were, however, powerful forces of uniformity acting upon the corrodians, too. The majoritarian view has it that all corrodians had given up a large degree of personal liberty and were rigidly subordinated to the hospital's regulations and the hospital officials' decision-making (Boldt 1988, 170; Besold-Backmund 1986, 247). In some hospital it was, however, possible to buy oneself out of the duties and spend 'conspicuous leisure' (Dirlmeier 1978, 527; Lambacher 1991, 122). This normative expectation of obedience was codified in many hospital regulations, for Regensburg the regulation of 1781 states as its first article: "Erstlichen sollen sie [the corrodians] einen jeden spitalmeister in allen gebührenden sachen ge-

horsam leisten, wie aich den übrigen offcianten."[5] (SpAR Kasten VII Fach 1 Fasz. 17). A strand of literature underlines the function of hospitals as "Orte der Verwahrung" where the inmates were exposed to measures of social disciplination (Watzka 2010; Weiß 2010). There was, of course, a difference between normativity and normality, but the former should not be underestimated. The seclusive nature of hospital life might have also inhibited the social capital networks respectable citizens had relied on earlier. Schürle (1970, 72) investigates the personal legal status of a corrodian and concludes that it was severely weakened, as the corrodian had relinquished several rights and was not substantially different from the status of the poor admitted for God's will. Furthermore, Schmidt (2010, 263) contends that hospitals understood themselves as Christian communtities and were historically inspired by monasterial cohabitation and their rules. They were supposed to live like "brothers and sisters", Besold-Backmund (1986, 248) contends. The fact that the different types of corrodies[6] put different societal strata, which had been living apart for all of their lives, in immediate spatial proximity could also lead to conflicts (Pauly 2007, 256). In Nuremberg, for example, we know that rich corrodians grumbled that they were subordinate to the regulations as everybody else and did not deem the food served adequate for themselves (Knefelkamp 1989a, 235).

The sheer ability to pay the entrance fee was certainly a social filter that did not live up to the complexity of stratification within early modern societies. This forced people to live with others who might happen to have the same economic capabilities, but could differ in several other non-economic categories of social status. A late 17th century-anecdote from the small Austrian city of Zwettl illustrates that status could not be transmitted completely unscathed into a hospital: The decision of some city councilmen to enter the local hospital had been derisively commented by an inmate with a much more modest background, a former shoemaker: "Jetzt seins wohl grosse Herren, wan sie aber alt werden, müssens das spitall hietten […]."[7] (quoted after Weiß 2010, 222). The man was sentenced to eight days of arrest.

To conclude, some of the distinctive potential had to be sacrificed when entering the hospital. Alongside the material contract, the immaterial dimension asked inmates to give up large parts of their personal independence, while the hospital would ensure a respectable conduct of all its inmates through its regulations, so one could rest assured that this was an honorable institution. The hospital appears to have been a compressed version of the outside society where formerly distant points were sequeezed somewhat nearer to eachother, without overlapping.

3.5 Economic Philosophy of Hospitals and Profitability of Corrodies

In order to understand how the sale of corrodies was operated by the hospitals, one comes inevitably across the question of the economic philosophy of the hospitals. There is fundamental dissent as to which extent hospitals were economically rational actors which were intent on profit-maximation. It is clear that economic reasoning per se did not pose a threat to chariatable activities, but there is a certain degree of contradiction which could probably express itself in a slow process of extrusion. It has to be further noted that the institutional diversity of hospitals renders a fitting generalization very difficult. Rather influential was the Aristotelian distinction between *chrematistike* implying the art of amassing wealth, and *oiko-*

[5] Which roughly translates to English as "Firstly, the corrodians shall pay obedience to the hospital master in all due matters as well as the other officials."
[6] Our case of Regensburg, where formally only one type of corrody existed, indicates that even within the same category a great variance of social background was possible.
[7] Which roughly translates to English as "Now they are grand gentlemen, but when they grow old, they have to enter the hospital.".

nomia, the household art, which consisted in acquiring all which was necessary to sustain oneself (das Neves 2000). The first was condemned as unnatural for humans.

Between the lines Bell & Sutcliffe (2010) draw in their seminal study on the mathematics behind the pricing of corrodies a picture of medieval corrodian-institutions rather purposefully pursuing their economic interests against the admonitions of contemporaries. Landolt (2007, 282) claims that the corrodization of the high and late Middle Ages was a rather deliberate process to maximize the hospital's revenue by replacing the unprofitable poor with profitable corrodians. "In the economic management of many medieval hospitals an economic thinking can be ascertained early on, which strove to attain the highest possible economic gain." (Landolt 2007, 285). This picture seems somewhat too extreme. It is well-documented that hospitals could in certain realms of their many activities be very profit-oriented in their decision making, but this behavior was mostly conditioned by context factors, as we will see with St. Catherine's brewery expansion.

In fact, in the sources we find regulations from several hospitals that the sale of corrodies should at least not be to the institution's economic disadvantage. Partially, this principle was prominently enshrined in the Spitalordnung such as in Freiburg (1318), Basel (1455), Strassbourg (15th century) or Munich (1328). Partially, adjustment of prices or provision were justified by changing prices, such as in Konstanz or Munich (Dirlmeier 1978, 465/6). In early 16th century Tübingen the territorial lord even intervened to remind the hospital's leadership only to take in corrodians who could bring in enough money. At the end of the same century the officials considered charging the corrodians twice of what they would consume (Aderbauer 1996, 111-12). The founder of Nuremberg's Heilig-Geist-Spital even forbade the hospital officials to sell poor man's corrodies because he reckoned them to be loss-making (Knefelkamp 1989a, 220). Aspelmeier (2009, 343) reconstructs in his comparative study of the economy of two North-West German hospitals their paradigm of economic decision-making. He claims hospitals were task-, not profit-centered institutions, and thus, developed a management style which was rooted in a passive and rather reactionist mode of decision-making. Some descriptions have tried to capture this ambiguous nature in terms such as "Wirtschaften mit sozialem Auftrag" (Sonderegger 2010, 191) or "Unternehmen für die caritas" (Stunz 2005). They should be "economic" in the Aristotelian sense. Contrarily, one of the few empirical investigations comes to the opposite conclusion: Heimpel (1966, 53) has calculated for one late 16th-century case how the entrance fee relates to the hospital's costs associated with the maintenance of the corrodian, judging that the corrody was extremely underpriced. It cost the hospital three times more than it earned. The numerous contemporary admonitions Bell and Sutcliffe (2010) have compiled seem to point in the same direction.

The question of the profit-orientation of the sale of corrodies is substantially linked to the entire business model of early modern hospitals. As multi-functional institutions the sources of revenue were – at least up to a certain degree – diversified (Heimpel 1966; Pohl-Resl 1996; Gerstmeier 1993; Lambacher 1991). The extraction of land rents from estates acquired through early foundations and donations of land often constituted the most important source of revenue for hospitals (Heimpel 1966; Gerstmeier 1993; Lambacher 1991, 303; Haug 1965, 102). In-kind land rents helped hospitals provide diet to their corrodians well below market prices (Kleiminger 1962, 99). In spite of exceptions (Gerstmaier 1993, 64) a majoritarian view doubts that corrody-business was a major source of revenue for the hospitals (Ohngemach 2008, 271; Neumaier 2011; Lambacher 1991, 300; Zeller 1952, 118; Schulz 1993, 190). Schulz speaks of less than 10%, Neumaier even of less than 5%. This could have meant that the financial constraints under which hospitals operated their sale of corrodies could be mitigated through cross-financing measures. It could also be theorized that not so much the amount, but the kind of revenue mattered to the hospitals: The sale of corrodies served the

quick acquisition of smaller amounts of cash, strengthening the short-term liquidity of the hospital rather than its general finances.

Regardless of whether corrodies were under- or overpriced, it is not disputed that hospitals carried out calculations on the profitability of the sale of corrodies, even if it is questioned if their methods of accounting were sufficiently complex to successfully coordinate their policies (SpAR Kasten VI Fach 3 Fasz. 8; Knefelkamp 1989a, 220; Aspelmeier 2009**,** 98; Dirlmeier 1978, 462). Thus, it can safely be assumed that there was a relation of whatever nature between the entrance fee and the costs the hospitals incurred. The profitability was object of discussions within the hospitals: When the St. Catherine's hospital entered economic hardship in the second half of the 18th century, the hospital council heatedly discussed if that should lead to the preferential treatment of applicants offering to pay higher sums. This pragmatic reasoning was countered with the charitable mission of the foundation which ought to be upheld (Neumaier 2011, 70). It seems that in the end the pragmatists prevailed. The pragmatist view had adherents elsewhere, as well, as the examples of Tübingen and Siegen show (Aspelmeier 2009, 97; Aderbauer 1996, 111).

Conflict about the economic orientation of hospitals could even crystallize in the question of the ongoing corrodization. The Electorate of Palatinate outlawed the sale of corrodies to rich people in 1574 altogether because it was perceived to be "wider der spitäl natur und eigenschaft" because "sollen hinfüro in solche spitäl allein aufgenommen arme, krancke und schwache leut, die sonst kein hülf haben"[8] (quoted after Hermann 2018, 19-20). It was, however, acknowledged the need for corrodian-institutions, just not hospitals should be abused to satisfy it. In 1536 a Cologne synode scourged the practice in general as a perversion of the actual purpose of the hospitals and a crime against the poor: "We condemn the abuse which has become usual in some places that under neglicience of the poor and the needy, to which the hospitals are dedicated, out of private intention of the hospital's officials not only the healthy, but also the wealthy are admitted, simply so they can live in comfort and idleness." (quoted after Hermann 2018, 19). How deeply engrained these convictions were shows the example of the Heiligen-Geist-Hospital in Lübeck which radically changed policy. It suspended the previously very actively operated sale of corrodies in 1736, recognizing that it has lost its foundational purpose, poor relief, out of sight (Hatje 2008, 325).

3.6 The Pricing of Corrodies

There appears to be broad consensus that there were no rigidly pre-defined price categories, but the pricing took place on the basis of individual case assessments and was put down in individual contractual agreements (Dirlmeier 1978, 463; Aspelmeier 106; Holzwart-Schäfer 2005, 13; Reddig 1998, 190). Hatje (1998, 216) writes that the practice of admission was characterized by a "minimum of normative determinations and a maximum of single-case decisions". The complexity of the pricing made this indeed necessary. As to be shown below, several factors had to be individually adapted to the properties of the applicant. The administrative effort this caused remained – given average yearly admission numbers between five and ten at St. Catherine's – fairly manageable**.** Occasionally, minimum prices are mentioned (Dirlmeier 1978, 463). This implies how much the officials were committed to finding an adequate price for every corrodian. Finding the *iustum pretium*, the just price, was not only a business problem, but also a moral issue for institutions which deduced their raison d'être from their foundational mission of Christian charity. The calculation with individual life expectancy, unforeseeable in its very nature, gave the business a strong speculative component,

[8] This roughly translates to English as "against the nature and characteristics" and "further should only such poor, ill and weak people who have no other help be admitted in such hospitals".

even after pope Calixt III. ultimately had acquitted rent business of the accusation of usury in the mid-15th century (Hermann 2018, 17).

It is disputed to what extent the types of corrodies were up to negotiation. Aspelmeier and others (2009, 102; Boldt 1988, 146; von Chiari 1972, 110; Schulz 1993, 188) claim that negotiations were so individual that applicants could choose from a basket of services what they deemed desirable and then only pay for the requested items. In other hospitals the categories seem to have been more rigid and corrodians had to choose either one or the other type of corrody (Aderbauer 1996, 122; Ohngemach 2008, 284). Given the desire for social distinction and the availability of money, it seems reasonable that for normal applicants only one type of corrody realistically came into question. To determine which policy was pursued is crucial for assessing the pricing, because individually negotiated conditions are close to impossible to ascertain, leaving out a central variable in the pricing equation.

Which factors played a role in the pricing of corrodies? Our knowledge is somewhat assymetrical since the literature seems much more informative about person-related, thus time-invariant, factors rather than time-variant factors, such as macroeconomic developments. This is certainly due to the fact that most analyses on the pricing of corrodies lack an explicit time-dimension and that macroeconomic analysis rarely is an elective in Medieval studies.

Age is among the most commonly named factors (Besold-Backmund 1986, 221; Holzwart-Schäfer 2005, 14; Zuijderduijn 2014, 12; Ohngemach 2008, 271; Neumeier 2011, 123). This makes sense as the sale of a corrody contained a significant longevity risk, should the corrodians live longer than expected, incurring unanticipated costs to the hospital. First life tables became available during the 17th century, but it is highly dubious if they were used at the hospitals (Zuijderduijn 2014, 16). As Bell and Sutcliffe expect, the officials would rather rely on intuitive empirical knowledge (Bell & Sutcliffe 2010, 147). The size of the institution might have played a role here, as well: Large corrody-homes could hope to diversify away some of the risk, while smaller ones would suffer more from the consequences of adverse selection. It has to be noted, however, that age was only a proxy for individual life expectancy. Longevity would very much be determined by other factors which were harder to assess, but not completely out of the reach of early modern hospital officials, such as the personal state of health. At least under certain circumstances a cursory inspection of the applicant could have yielded information on longevity. Personal health has thus to be understood as a complementary factor to age for individual life expectancy (Ohngemach 2008, 271; Holzwart-Schäfer 2005, 14). In 1512, the hospital in the Swiss city of Bern asked long-term corrodians for supplementary payments, apparently because they had "overstayed" their expected time, in Biberach an der Riss services for long-living corrodians were curtailed (Reddig 1998, 190). In Memmingen exemplary calculations for corrody contracts from the late 15th century explicity include age (Lambacher 1991, 127). To be added is that in this regard changes in average life expectancy would have impacted the hospitals. A sudden mortality crisis could mean great profit for the hospital when corrodians had passed away before their time and their spots could be resold. In the long run, changes would have required adaptational mechanisms, in the early modern period, however, no significant changes of life expectancy are known (Shahar 1993, 329).

Sometimes wealth of the applicant is brought up as a decisive factor (Aspelmeier 2009, 99; Knefelkamp 1989a, 222; Neumaier 2011, 211). Wealthier corrodians, independently from the type of corrody, would have had to pay more than less affluent applicants. This presupposes that there was at least to a certain extent a charitable intention of an *iustum pretium* behind corrodies. Dirlmeier (1978, 468) offers a contrasting possible causal link: Rich corrodians paid less for what they received because a portion of their entrance fee was paid in political instead of economic capital. As institutions which were, if not even being completely municipal, tightly interwoven in the municipal power system, the former could partially be as valua-

ble as money for hospitals. The embeddedness of the hospital and its decision-makers in a spider's net of socio-political relations certainly had an unsystematic effect on pricing. Discounts for former workers, upon recommendation by high-standing personalities or, more generally, pervasive favoritism demonstrate that the sale of corrodies could be a deliberately applied tool to cultivate the relations of the hospital or one of its officials with the outside world (Fouquet 2007, 66). There is even evidence of corruption (Besold-Backmund 1988, 232).

Neumaier (2011, 114) discusses sex as a proxy for wealth as women earned less the men. It can, however, be argued that women, more precisely, widows were an archtypical category of groups worth of charity (Reddig 1998, 213; Borscheid 183, 241; Besold-Backmund 1986, 240). The term "feminization of poverty" in the early modern period has crystallized the higher vulnerability of women (Reddig 1998, 202), the aftermath of the Thirty Years' War was certainly a period when this was particularly acute. Several authors name charitable considerations as an important factor in the pricing (Besold-Backmund 1988, 221; Reddig 1998, 192). It is thus not surprising thus that sale of corrodies were initially "donations against payment" (Reicke 1932b, 194). Also in Lübeck and Bamberg the sums to purchase a corrody were in some cases formally labeled as "foundations" resp. "donation against payment" even if it was obviously an act of purchase (Schulz 1993, 188; Reddig 1998, 191).

Some very specific factors are mentioned for single institutions. Geographical origin could play a role, given that many hospitals considered themselves civic institutions explicitly addressing the citizenry of a city (Besold-Backmund 1988, 221; Scheutz 2010, 184). In Göttingen strangers were charged substantially more for a corrody than locals (Hatje 2008, 326), in Nuremberg similar practices seem to have been followed (Knefelkamp 1989a, 223). The mode of payment could have played a role, too: Was the hospital in need of quick liquidity, it could for example give a discount to corrodians offering exactly that or which paid the sum at once instead of installments. Since some hospital relied on corrodians as a source of cheap labor, even the own working force could be taken into account as a lowering factor by the officials (Neumaier 2011, 277; Reddig 1998, 189). Holzwart-Schäfer (2005, 14) suggests that the kind of payment, in cash, in kind or installments, could have influenced the price at St. Catherine's Hospital in Esslingen.

Apart from personal criteria location factors could influence the price of a corrody: Reddig (1998, 191) claims that the price of a corrody correlated with wealth and size of the city it was located in, randomly comparing 16th century corrody prices from South German cities. To retire in an early modern metropolis was more expensive than in a rural town. We might add that size of the city could be a proxy for size and affluence of the hospital. The higher income level, higher costs of living and a slightly different clientele might be reasons for this.

The impact of macroeconomic factors on the pricing are with the notable exception of Bell and Sutcliffe (2010) largely ignored. We find very scattered remarks that price development might have impacted corrody prices and that this was linked to risks for the hospitals (Ohngemach 2008). Especially, the development of interest rates seems to have been crucial for the corrodies as they could collect the returns of the invested entrance fees (Bell & Sutcliffe 2010; Zuijderduijn 2014). Dirlmeier (1978) claims that hospitals spent roughly twice the yearly revenue from interest rates on the maintenance of the corrodians. From the late Middle Ages to the dawn of modernity interest rates underwent a long-term decline in Europe (Epstein 2000). The long-run development of the cost of living affected the hospitals' ability to provide the corrodians with food stuffs, even if we assume that they received quantity discounts (see 5.2.2). For the price development of other needed materials such as fuels the same is true. This decisively hinges on the question if the hospitals were net consumers or net pro-

ducers. Declines in real wages may have inhibited the possibility of certain strata to acquire a corrody, as well.

4 Institutional Background: St. Catherine's Hospital in Regensburg

Chapter 3 has shown that, apart from some commonalities, corrodian-institutions in the lands of German language offered a very heterogeneous picture as the policies of how the retirement business was handled could differ a lot. The environment factors influencing the sale of corrodies appear to be rather strong. Thus, it is essential to gain an in-depth understanding of single institutions to make sense of how corrodies were dealt with. Exactly this is now delivered for St. Catherine's Hospital in Regensburg.

4.1 St. Catherine's Hospital

The city of Regensburg is situated in what is Southeast Germany nowadays, at the Northern most point of river Danube. Until being incorporated by the Kingdom of Bavaria in the Napoleonic Wars, it retained the status of a city state, only subordinate to the Emperor. St. Catherine's Hospital has survived the winds of time and still operates as a retirement home and brewery to date.

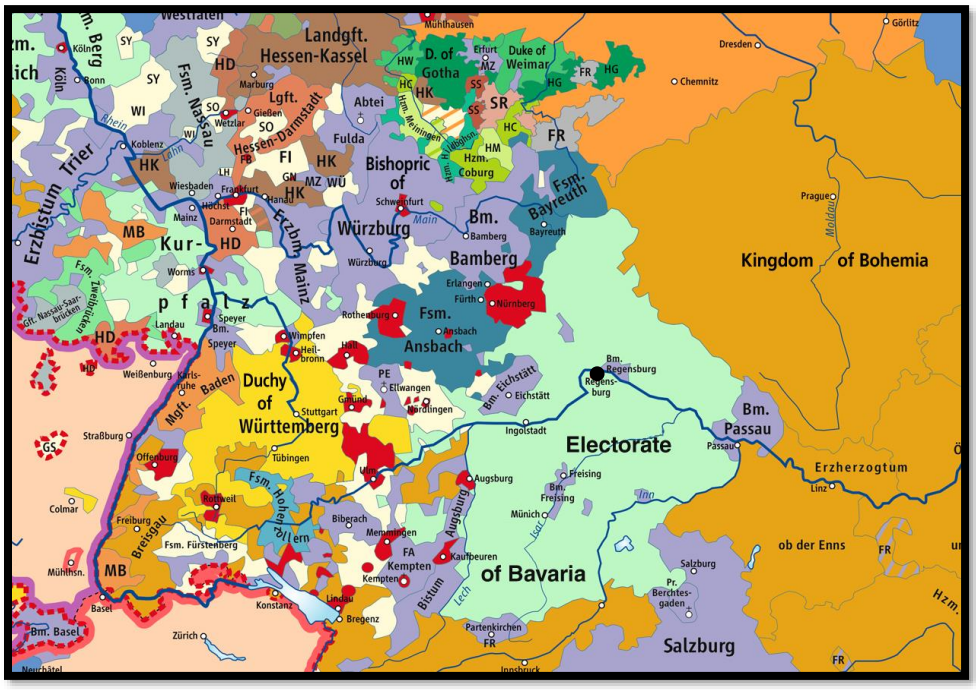

Figure 1: Regensburg's location in the South of the Holy Roman Empire in 1789

4.1.1 Historical Sketch

"Löbliches St. Katharinen-Bürgerspital am Fuße der steineren Brücke zu Regensburg"[9] was how the hospital referred to itself, mirroring the self-understanding and political identity of the institution. When the first building of the hospital was errected in the early 13th century, it was not placed within the city walls at the southern bank of river Danube, but at the northern

[9] This translates roughly to English as "Laudable St. Catherine's Civic Hospital at the Foot of the Stone Bridge in Regensburg".

tip of a newly built stone bridge which spanned the river south to north. Hygiene and fresh water supply probably played a role, yet very certainly political motivations[10] prevailed: The small complex of buildings, which now shielded the bridgehead, formed a political exclave of Regensburg at the northern river bank. The neighbouring buildings instead made up the village of Stadtamhof which was ruled by the dukes of Bavaria (Dirmeier/Morsbach 1994, 14). This location was as fateful as it was ever contentious and the city and the Dukes of Bavaria were entangled in constant arguments and lawsuits against eachother. It was because of this that the hospital would manifest in its very name the political allegiance to the Imperial City of Regensburg, although located at the "wrong" end of the bridge. The Duchy of Bavaria, later the Electorate of Bavaria, instead insisted that the hospital call itself "St. Catharinen Spital zu Statt am Hof" and refused to acknowledge any correspondence with the hospital under the top name. Only the omission of the name on the hospital's seals could appease the Bavarian authorities (Kröger 2006, 873).

The particular location should wield significant influence on the development of the hospital until Regensburg was incorporated into Bavaria in the wake of the Napoleonic Wars. In order to bolster his political standing against the Bavarian dukes, the founder, bishop Konrad IV., had teamed up with the nascent citizenry: In its first constitution of 1226, he determined that the hospital would be steered by the so called Spitalrat (hospital's council) which was to be composed of four clergyman from the Bishopric and four city laymen to represent the city council. Even if being steered by the Bishopric and the city council, St. Catherine's hospital understood itself as a civic institution, therefore underlining to be a "Bürger-Spital", a citizens' hospital. Bavarian sources in turn constantly omit this supplement (Neumaier 2011, 175). Since the 16th century admission presupposed citizenship. When Regensburg banned Catholics from obtaining citizenship in the aftermath of the Thirty Years' War, an exception was made for catholic corrodians who were still granted passive citizenship to enable their admission.

The hospital was thus situated at a three-fold intersection of power, firstly between secular and spiritual authorities within Regensburg, secondly between Catholics and Protestants after the reformation and thirdly between the Imperial City and the Duchy of Bavaria. This could turn out very destructively as inter-confessional infighting and grain blockades showed, but it provided the hospital also with an unsually high degree of independence because the different powers kept eachother in check and tried to fend off the others' interferences (Dirmeier 2018). The title mirrors some of the for a suchlike institution indeed surprising self-assurance.

4.1.2 The Economy of St. Catherine's Hospital

In the first 100 years of its existence St. Catherine's quickly gained wealth through numerous donations and foundations: In 1333, it counted among its estates 166 farms, 110 other estates, called predium, as well as an unspecified number of forests, fish ponds and vineyards (Kröger 2006, 875). The estates laid scattered at maximum 100 km around the city Regensburg. Four maintenance farms were established where primary products for the hospital’s own consumption were produced. The biggest of them was situated right at the hospital’s grounds in Stadtamhof. A large granary, a brewery and a bakery produced much of what the corrodians and the staff consumed, making the hospital to a good portion self-sufficient and a net producer. The surplus was sold and then used to pay the wages of the employees.

Apart from donations the best primary source-based documentation there is for periods of economic crisis of the hospital. In the mid-14th and the mid-15th century the Spital slid twice

[10] It is a well established fact that hospitals were a common tool in urban policies of territorial expansion (Ohngemach 2008; Pauly 2007).

into economic crises. Standard procedure in these situations it seems to have been that the city authorities and the bishop intervened and provided economic leadership to reorganize the budget. In the second crisis of 1451 the city council and the bishop instituted some kind of auditing of the hospital's books which identified the increasing gratuitous admission of needy persons as one of the biggest strains on the budget (Dirmeier 2018, 134). It is certainly not too far fetched to consider this as one of the driving forces behind the accelerating corrodization thereafter. The most exisential crisis, economically and physically, came with the Thirty Years' War in the first half of the 17th century. The hospital and its estates estates were situated all scattered in the Electorate of Bavaria and were devastated by belligerents from all sides. Accounts from the 1670s document that more than 20 years had not sufficed to re-cultivate all estates. Some still lay fallow and could not contribute to the hospital's economy. This hit the backbone of the hospital's economy, undermining the land rents as the carrying pillar of the finances. In combination of expulsion and the fighting large parts of the buildings were destroyed and all but four steadfast corrodians had fled during the war (Neumaier 2011, 44).

The hospital was, however, able to strategically invest in its means of production: The considerable expansion of the brewery in the second quarter of the 18th century proves that the hospital was in fact capable of pursuing profit-maximizing strategies which went well beyond rearranging the manoralisitic management of their estates. In the 1720s and 1730s when the brewery's revenue was soaring, the hospital's leadership had proactively made strategic investments in their means of production by constructing a new malt mill and a new brewer's appartment in 1729 to boost production. In 1736/37 the brewhouse was remodelled for 1600 guilders which equals the combined revenue from the sale of corrodies from the previous four years. The money, at least as far as we can see, was not directly invested into the corrodian business. Neither were there more new admissions than average nor were the food rations changed much. In contrast, in these three very prosperous decades the entrance fees rose to unprecendented heights (See 6.5).

The profitable brewery was ruined after Bavaria decided to prohibit beer exports to Stadtamhof and the hospital slid into a deep economic crisis in the second half of the century: Several reasons have been named. Land rents fell and many of the peasants tilling the hospital's land were unable to pay the tithe. This forced the leadership of the hospital to purchase expensive grain externally. Furthermore, the costs of the extensive renovations of the 1760s got out of control and ended up much higher than the budget had provided funds. The devastations of the Austrian War of Succession added to that (Kröger 2006; Neumaier 2011; Lechner 2008 134). At the turn of the 19th century St. Catherine's was at the brink of bankruptcy. Generally, the principles of hospital's reconomy remained largely unchanged from its high medieval foundation to its incorporation into the nascent welfare state in the 19th century: It lived on the land rents extracted from its various estates which were either paid in kind in cash to the hospital such as countless other hospitals in Germany (Neumaier 2011, 54; Ohngemach 2008). In certain periods, especially in the first half of the 18th century, the large brewery producing beer and spirits complemented the budget.

4.1.3 The Urban Economy of the Imperial City of Regensburg

Of course, the hospital's economy was embedded in the economy of the Imperial City and in the agrarian yields of Bavaria through its estates. In the 161 years of observation (1649-1809) the economic environment in Regensburg was at best stagnating. The city had accumulated considerable wealth in the high Middle Ages through long-distance trade, benefiting from its benevolent geographical location between East and West at a major river, a Roman network of roads and favorable political independence (Schönfeld, 1959). In these prosperous times St. Catherine's hospital had been founded and acquired its estates. In early modernity the economic situation was turned upside down. Regensburg had been losing market shares against

other trade competitors since the 14th and 15th century (Hable, 1970). The Thirty Years' War left the city's finances in disarray. Gömmel (2000, 488) concludes: „[After the Thirty Years' War] Regensburg was a heavily damaged, mostly impoverished city of only local significance. Already the war damages of 1.6 million fl. were a burden the weak economy could not bear." Regensburg's isolated location within the Electorate of Bavaria made its trade vulnerable to mercantilitsic policies of high tolls from its neighbour. In exchange for political concessions the electorate arbitrarily imposed so called "Getreidesperren" when all grain shipments were cut off from the city and the prices skyrocketed (Schönfeld 1959, 32). The city was surrounded by a ring of Bavarian toll stations, one in fact located right beside St. Catherine's in Stadtamhof. Municipal craftsmanship was genereally weak, only brewing enjoyed some significance (Lechner 2008, 123; Hable, 1970). The institution of the Perpetual Diet in 1663 instead strengthened domestic consumption, but production remained weakish throughout the 18th century (Gömmel 2000). Structural changes such as the near total disappearance of big merchants worsened the situation. The 18th century saw falling real wages, leading to increasing impoverishment (Schönfeld 1959, 107). In terms of number of inhabitants was around 10 to 15.000 in the first half of the 18th century, probably stable since the late 17th century. In the second half of the century, regardless of its precarious economic conditions the town witnessed an increase of inhabitants (Kühne 2006, 41).

4.2 Corrodians at St. Catherine's Hospital

With re-admitting corrodians after the end of the Thirty Years' War in 1649 the hospital's leadership followed a policy which had been established for roughly two centuries by the mid-17th century. But it was only then that St. Catherine's turned into a corrodian-only institution, the other charitable functions had eventually ceased apart from the "dry" corrodies which consisted of a handout of beer and bread to a fixed circle of deserving persons (Dirmeier & Morsbach 1994, 16). The adverse economic conditions certainly facilitated this strategical decision. We possess no unambiguous indications that this was the rationale, but the strategy of admitting corrodians to alleviate budgetary pressures has precedents in the hospital's history. Having been founded as a hospital for the sick - which could very well also include old age-related diseases - and a pilgrim accommodation, the first indications for the admission of paying corrodians appear at the turn of the 14th to the 15th century (Neumaier 2011; Sahliger 1956, 25). The Spitalordnung of 1451 indicates that the admission of pecunious corrodians had quickly become quite customary (Treiber 1976b, 45). Dirmeier points at the late 15th century as the moment when the "corrodian business" was fully established. There seems to be a consensus that the "corrodization" of St. Catherine's was an economic strategy to exploit new sources of income when other sources had dried up (Dirmeier 2018, 132). These had been the donations in the mid-15th century, and would be the devastation of the Thirty Years' War in the mid-17th century. As in many other hospitals, distinctions in terms of diet and accommodation between the "rich" and "poor" corrodians living on-site existed (Kühne 2006, 55). These were abolished after 1649 and all "real" corrodians living at the hospital received nominally the same treatment.[11]

4.2.1 Admission Procedure and Supplications

The admission procedure at St. Catherine's was straightforward: The hospital council took all decisions independently. Prospective applicants would write a supplication letters and/or communicate to one of the officials that they were willing to enter, stating their case. Mostly, they were waitlisted, as earlier requests normally were prioritized, under certain circumstances one could jump the line, however. Every single case was discussed in the hospital council

[11] We know of special cases when affluent corrodians purchased special conditions for their stay. This might be a remnant of previous distinctions, was yet not of systematic nature.

and, if needed, further information was requested. In terms of entrance fees, the hospital would often enter into negotiations with the corrodians.

Figure 2 shows the yearly admissions and exits, the vast majority of them deaths, over 16 decades. We see that admission was generally weaker in the course of the 18th century, while the most admissions took place in the 17th century. This is certainly linked to grave differences in duration of stay at the hospital, leading to a higher turnover (see 6.4). The spike in 1714 is caused by the Black Death, wiping out most of the hospital's inhabitants. How big the chaos was the disease caused can be seen in the fact that the normally very meticulous records of deaths do not record any in these years. The hospital's officials certainly had other things to worry about.

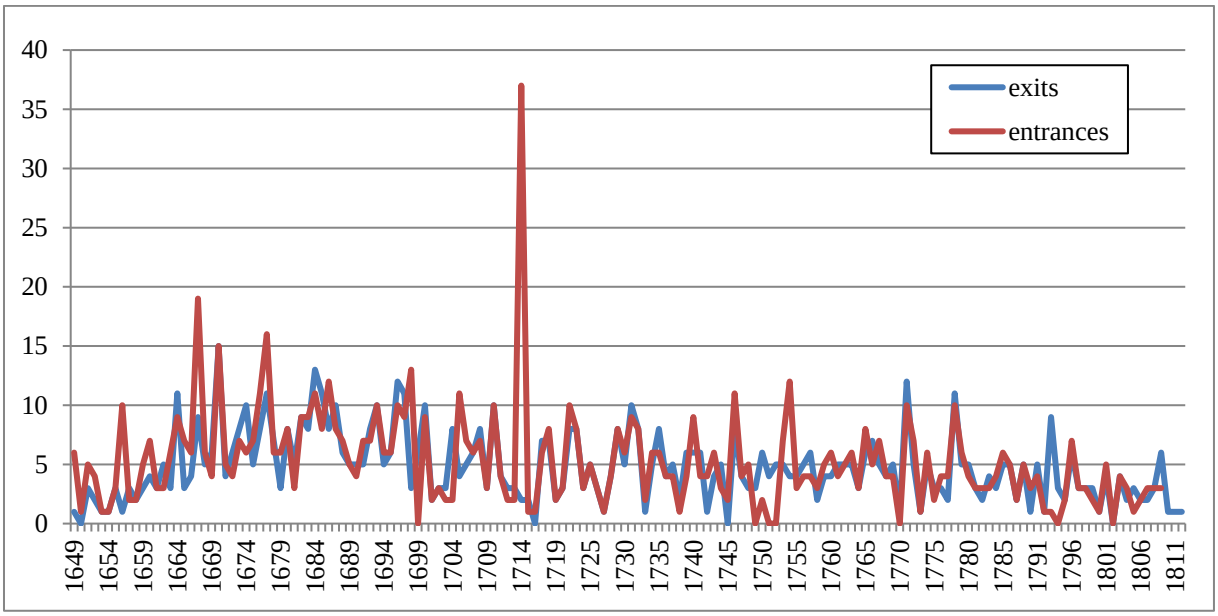

Figure 2: Yearly entrances and exits of "real" corrodians, 1649 to 1809, own calculation based on data from Neumaier (2011).

Stanislaw-Kemenah (2008) analyzes the linguistic features of the supplication letters of a 16th century hospital in Dresden. She concludes that the language is formulaic and rich in topical allusions to lifelong righteous conduct, deplorable living conditions and endurance in hardship (Stanislaw-Kemenah 2008, 400). The preservation of supplication letters at St. Catherine's is best for the second half of the 18th and the early 19th century. Language and mode of expression are similar, however. Thus, we read in the supplication letter of the 43-year old ancilla Anna Margaretha Müllerin of 1805: "In lack of a necessary income and left on my own, I have from my earliest youth onwards poorly sustained myself with work and as an ancilla I have for many years strained and depleted my bodily forces, until longsome and painful diseases, with which God has scourged me, have rendered my body powerless and have made it necessary to abstain from wine." (SpAR Kasten VI Fach 3 Fasz. 8). The information on the economic aspects of the life stories appear to be rather generic and the concrete motivations behind the choice of old age at St. Catherine's are scarce (for other hospitals see Scheutz 2008, 175). Occasionally, we can catch a glimpse one saving behavior when the sale of real estate is mentioned or on the change between corrodian-institutions. Sometimes the hospital councilmen underlined aspects they deemed most important in the supplications, which is entrance fees offered as well as tangible references to the diseases suffered from. Nevertheless, the fact that supplications were written and how a difference of status was addressed is important. Writing supplications was practiced in early modernity to create direct contact of a subordinate supplicant with a higher authority (Stanislaw-Kemenah 2008, 331; Weiß 2010, 221). This difference in status becomes evident in how the hospital and its coun-

cilmen were addressed in the letters which were certainly no sober economic contracts between equals (Scheutz 2008, 173). Coming back to one of the initial questions on the mixture between charity and economic reasoning this suggests that the supplications perceived the charitable aspect very strongly.

Secondly, the supplication letters could give us a rough estimate of the demand of retirement spots at the hospital. All evidence points that demand was indeed very high and for every opening spot there were many supplicants who were partially waitlisted for several years until they could take in a new spot (Neumaier 2011, 215). For the first decade of the 19th century the number of supplications for a real corrody was at least twice as high as the number of available spots. It seems that the "ethics of queue" could be quite rigid, being a factor in the admission decision. It was not as straightforward as people could have cut the line simply by offering a large amount of money.

4.2.2 Material Living Standard of the Corrodians

An important and widespread indicator of living standard is nutrition (Fogel 2004). Unlike numerous other hospitals there was no differentiation in diet between the real corrodians after the Thirty Years' War. The accounts of what the corrodians ate are plentiful (Kühne 2006). To allow for a systematic comparison and classification these data will be transformed into per capita amounts and converted into calories. Allen has compiled a basket of consumer goods comprising the food stuffs seen in Tabe 1, which is widely used as a reference point for studies on material living standards. According to Allen, it captures a "passable standard of living" (Allen 2001, 427) right above the poverty line, putting an adult male in the second lowest decile of population in late 18th century England in Fogel's (1991) calculations on per capita calory intake. Allen then goes on to deflate nominal wages with the basket. For our purposes it will suffice to compare the weight of the food stuffs between Allen's passable living standard-basket and the diet of corrodians at St. Catherine's. As, of course, the hospital's diet varied over time, the composition approximates mid-18th century consumption because it lies closest to Allen's basket which is largely made up by 18th century data (Allen 2001, 426). The fact that Allen's basket refers to an adult male who might carry out hard physical labor whilst St. Catherine's was in majority composed of elderly and women who tended to consume less and work less hard should be taken into account.

	Allen		**St. Catherine's Hospital**		
			Real corrodians		**Dry corrodians**
Food Stuff	*quantity*	*nutritional value*	*quantity*	*nutritional value*	*quantity*
Bread	182 kg	1223	264 kg	1772	158 kg
Beans/Peas	52 liters	160	0[12]	0	-
Meat/Fish	26 kg	178	90,5 kg	620	-
Butter	5,2 kg	104	2,8 kg[13]	56	-
Cheese	5,2 kg	53	0	0	-
Eggs	52 each	11	58 each	13	-
Beer	182 l	212	341 l	398	302 l

[12] Quantative information on the consumption of vegetables at St. Catherine's is missing. From qualitative sources we know that vegetables, mostly sauerkraut or other forms of cabbage, were served in considerable quantities (see Kühne 2006, 241).
[13] Refers just to lard. Total butter consumption must have been higher.

Wine	68,25 l [14]	-	41 l	95	-
Daily total		**1941**		**2954**	

Table 1: Comparison of Allen's and St. Catherine's baskets of goods. Quantity refers to a consumption of an adult per year, nutritional value is given in calories per day. Data for St. Catherine's from Neumaier (2011) and Kühne (2006).

Most notably, fuel which is included in Allen's basket is omitted in Table 1 since we lack indications on how much of it was consumed. However, the food stuffs alone should suffice to provide a good approximation of the living standard at the hospital. Clearly, the diet was much more affluent at St. Catherine's and was thus well above a poor living standard. Corrodians consumed for example 187% of the beer and 145% of the bread in Allen's basket. In terms of daily calory consumption St. Catherine's lies at a 152% of Allen's basket even if not fully accounting for butter and under omission of vegetables. Many of the food stuffs consumed at St. Catherine's were produced by the hospital itself which was thus easily able to provide amounts of food which it could not have acquired at market price (for which Allen's basket is intended) (Kleiminger 1962, 99). Given that real corrodians did not have to spend any money on rent either, their living standard can be described as quite good. If we would insert them into Fogel's (1991) daily calory consumption table for late 18th century England where Allen's basket ranks in the second lowest decile of the population, the real corrodians of St Catherine's would rank in the fourth highest decile. Taking into account France which might be even more comparable to Regensburg in light of economic development (where Allen ranks fourth lowest), the diet at St. Catherine's which still does not include vegetables and only parts of butter would rank slightly below the second highest decile. Interestingly, also the dry corrodians which were obviously much worse off than the real corrodians benefited from the hospital's favorable production modalities. Allen estimates that bread and beer made up around 50% of the spending (excluding rent) (Allen 2001, 421). For both food stuffs they received amounts which translate into calories enabling passable living.

4.2.3 St. Catherine's in the Urban Landscape of Care Provision

By the end of the Middle Ages a fully differentiated system of care provision had established itself in urban contexts, having been shaped by the quantity and quality of demand (Ohngemach 2008, 257). It is generally assumed that differentiation took place along functional criteria, thus different aspects of care provision for the needy would translate themselves into different institutional phenotypes (Just & Weigl 2008, 156). In order to understand why applicants turned to St. Catherine's as a place for retirement it is crucial to understand which other commercial options they faced. Where the corrodians applied tells us almost as much as what they decided not to do about their retirement strategies. This sub-chapter should thus serve to contextualize the role of St. Catherine's within the small group of other institutions which offered comparable services in Regensburg. For practical reasons almost all studies on commercial retirement homes - such as this, too – focus on a single institutions. The question of an "urban landscape" of corrodian-institutions is quite of importance to our study of commercial retirement arrangements. How did similar institutions within a unitary context – in our case the city of Regensburg – relate to eachother? Did they form a network of care-provision, were they competing for corrodians on a commercial-retirement-market, did they specialize? The existence of a market for corrodies would have important consequences for the pricing, but it is general doubted that a product so particular had a market (Bell & Sutcliffe 2010, 147). But were there relations of any kind between the institutions? How did this formation influence the crafting of individual retirement strategies?

[14] Wine is used as a substitute for beer in Allen's basket. Real corrodians at St. Catherines instead enjoyed both, wine and beer.

Even if St. Catherine's was by far the largest corrodian-institution in town, it was by far not the only one. Apart from purely charitable arrangements, we know of at least five other places which commercially sold corrodies even if we do not know nearly as much about them as about St. Catherine's Hospital: The much smaller St. Oswald's Hospital offered corrodies for female applicants who were above the age of 30 and Lutheran (Kröger 2006, 466; Dirmeier & Morsbach 1994, 29). It had become municipal, but was rather exclusive, sheltering only around ten elderly women who had to have distinguished themselves by a virtuous lifestyle. The material living standard seems comparable to St. Catherine's. However, the entry restrictions were tough, hardly making it a viable option for many (female) corrodians at St. Catherine's with regards to their social background.

The following institutions, the former leprosy St. Leonhard, the Upper and Lower Seelhaus and the Pfründhof zu Osten, offered very affordable and Spartan corrodies which were not as well-respected as what St. Catherine's had to offer (Kröger 2006, 517). They maintained occasional gratuitous admissions throughout the 18th century at a time when St. Catherine's no longer bothered to do so and the border between corrodian-institutions and poorhouses was fluent. A major criterion of the "quality" of a hospital was apparently if it could afford its own kitchen and cook on-site. Being all municipal, the institutions were not as independent as St. Catherine's in the management of their budget, yet maybe somewhat less under economic pressure.

The "Blatternhaus St. Leonhard", a former leprosy, admitted corrodians while maintaining its function as a hospital. It was much smaller than St. Catherine's and still had a stronger focus on medical treatment, employing medical staff. These could charge extra fees for special treatment from more affluent customers, free admissions never ceased completely. The Upper and Lower Seelhaus offered low-price corrodies to women, mostly unmarried or widowed. The diet was sufficient, but surely not as abundant as in St. Catherine's. The number of corrodians remained in the period of investigation well below ten (Kröger 2006, 478). The „Pfründhof zu Osten" was created in the wake of a reorganization of the municipal alms provision due to damage of the Thirty Years' War. It was, as Kröger explains, the least respected corrodian-institution charging very low entrance fees, often not even that (Kröger 2006, 517). Interestingly, we see – in a very stylized manner – a similar trajectory in terms of the development of entrance sums as in St. Catherine's: A steady rise towards the end of the 18th century. For the year of 1795, for example, we know of two women who were granted admission paying 150 respectively 300 guilders of entrance fees. With these sums they would have surely had a good shot at a spot at St. Catherine's, too. The Pfründhof zu Osten might have recovered reputation in the course of the 18th century. Between 20 and 30 corrodians roamed the Pfründhof.

If we assume that people made their decisions on old age provision with at least a certain degree of strategic foresight, these were all possible options which had to be considered and matched with individual needs and desires. St. Catherine's was clearly more luxurious and more reputable than all other similar institutions in town (with maybe only the exception of St. Oswald's Hospital). A corrodian who had chosen St. Catherine's enjoyed a higher material living standard than most other urban corrodians and saw this personal status bolstered by the the reputation of his institution. Among corrodians he had the most desirable fate, however, also paid a higher entrance sum.

The fact that we find a number of cases where corrodians of St. Catherine's actually changed their care-giving institution demonstrates that the corrodians were very well aware of other options providing insurance against the risks of old age within Regensburg and traded institutions if necessary (Neumaier, 2011). For the Upper and Lower Seelhaus (see below) we have indications that some women moved to St. Catherine's (Kröger 2006, 483). For the 16th centu-

ry there are in indications that quite a few women from the Seelhäuser moved to St. Catherine's or St. Oswald's. Seeing corrodians change institutions strengthens the case for our assumption of deliberate choices within the framework of a retirement strategy. The agency of these people must have been considerable. This yet complicates the motive structure we can assume behind such decisions. The decision architecture of where potential corrodians went was thus more complicated than a simple maximization of material living standard with the money available. The decisional matrix of how corrodians apparently evaluated retirement homes seems to have contained other features.

There was a certain degree of awareness between St. Catherine's and these institutions. In the records it was noted when a corrodian left St. Catherine's to join another institution, without giving its name yet. The fact that is was not just an "exit" which was not be commented any further, but caught the enough attention to be worth recording reveals this was at least of a certain importance. The leadership of St. Catherine's was certainly aware of the differences in material living standard and reputation between the corrodian-institutions in town. While the others maintained free admissions blurring the boundary between commercial retirement homes and poorhouses, the practice was terminated at St. Catherine's, rendering it in tendence more dissimilar to the others. We know that some changes of corrodians were conducted if they threatened to besmirch the reputation of St. Catherine's and were send to lower-ranking institutions (Neumaier 2011, 227).

5 Data

As abundant as the data for St. Catherine's are, in some regards they cannot speak to us alone. As a preparation for the macroeconomic contextualization which will be presented in chapter 6 the auxiliary data will be described here in chaper 5. This is preceded by an in-depth introduction of the crown jewel of this thesis, the Regensburg dataset.

5.1 Primary Sources

The dataset is based on the archival work by Neumaier (2011) in the framework of a dissertation which was published in 2011. He largely relied on the St. Katharinen Spitalarchiv at the compound of today's retirement home where all the sources of the hospital are kept. For the matters of the corrodians the consultation of three additional archives was necessary. To reconstruct the granting of citizenship to newly admitted corrodians the Bürgeraufnahmebücher (the citizen admission books) at the Municipal Archive Regensburg were consulted. To fill in missing death dates the Archive of the Protestant Church in Bavaria provided parish records which complement the records at St. Catherine's. At the Episcopal Central Archive Regensburg protocols of the sessions of the Spitalrat were retrieved (for a detailed description see Neumaier, 2011, 744). The time span covered by the dataset marks two of the most important events in the hospital's history: The restart of the Thirty Years's War with its devastations and expulsion of Protestant corrodians and the destruction of the hospital during the Battle of Regensburg in the Napoleonic Wars and the subsequent complete reorganization in the Kingdom of Bavaria.

Table 2 shows all the different personal characteristics that could be reconstructed for the corrodians as well as their frequency. The main archival sources for these data were the protocols of the Spitalrat where it was decided upon admission and corrodians books which were particularly written to take account of corrodians (for real corrodians only from 1778 to 1811, for dry corrodians from 1688 to 1779). The accounts on the corrodians, called Pfründbücher in other locations, document the intention of the hospital's officials to take stock over the corrodians, too. The data quality is generally a little bit worse for the first decades of observation

where predecessors due to incomplete record keeping almost completely miss. In addition, the last last decade (1800 to 1809) is not complete, as some death dates after the of 1809 did not enter the dataset.

The only major data gap in the corrdians' mortality is in the years preceding 1713. Reasons and dates of death are frequently missing, especially in the time period 1706 to 1712. With great certainty this is owed to the catastrophic outbreak of the Black Death in Regensburg in 1713/1714 which along with a third of the city's inhabitants wiped out most of the corrodians who were because of their cramped living conditions even more vulnerable to contagion. The fact that we find a record high of 33 new admission in 1714 clearly points to the deaths of these corrodians which were because of the particular conditions not recorded. When calculating longevity we assume these data gaps to contain 1713 as year of death.

Characteristic	Real Corrodians		Dry Corrodians	
	Absolute value	in Percentage	Absolut Value	in Percentage
Name	901	100	795	100
Confession	885	98	768	97
Entrance fee	840	93	-	-
Date of entrance	856	95	779	98
Date of exit	788	87	620	78
Age at entrance	484	54	330	42
Age of exit/death	429	48	259	33
Reason of exit	779	86	608	76
Marital Status	617	68	525	66
Citizenship Status	708	79	276	35
Occupation	531	59	413	52
Place of Origin	724	80	454	57
Predecessor as Corrodian	437	49	574	72
Indication of neediness	102	11	244	31
Recommendation	50	6	66	8
Former worker	48	5	53	7
Bequest	125	14	-	-

Table 2: Overview of data availablity in the dataset by indicator, own calculation based on data from Neumaier (2011).

The dataset undoubtedly constitutes an abundant pool of information on the social background of the corrodians and the cost of commercial retirement. For the purposes of economic history the data have not been evaluated before nor put into the research context of commercial retirement. Neumaier's research interests lie yet very much in the fields of social and everyday history. For economic historians he has few incisive insights to offer. This is certainly in line with the generally weak position of economic history questions in historiography on corrodies, it is nevertheless innovative as it puts the inmates of a hospital into focus. Neumaier contents himself with simple descriptive statistics which for the interests of economic historians offer little. For the further handling of the data it has to be noted: All the cases for which we have no information on the entrance fee were dropped. As a result, out of 901 original cases 840, roughly 93%, were maintained. In case an entrance fee was given, but no year of admission, it was assumed the average duration of stay of the previous decade in order to be able to position the case in a time line.

5.2 Secondary Data

In order to contextualize the development of the entrance fees, other macroeconomic indicators are necessary. Firstly, the silver debasement of currency is depicted and discussed. For all three, silver content, wages and CPI the data were originally collected by Elsas (1936) and

most famously applied in Allen (2001). Pfister (2017) reviewed and partially enhanced them in his study on wage development in early modern Germany. At this moment, Pfister's dataset constitutes the most recent and most reliable data source for Germany in this period, as the data coverage for Germany is only slowly catching up to the relative abundance we enjoy for England or the Low Countries.

5.2.1 Conversion Rates and Currencies

In the sources the currency which the fees are given in is guilders (abbreviated as fl.) which was the common currency in the South German territories of the Holy Roman Empire throughout the early modern period. One guilder was generally subdivided into 60 Kreuzer and one Kreuzer into four Pfenning. These conversion rates remained stable through the period of study. In order to make the entrance fees comparable over time and account for debasement and inflation, they are customarily converted into grams of silver.

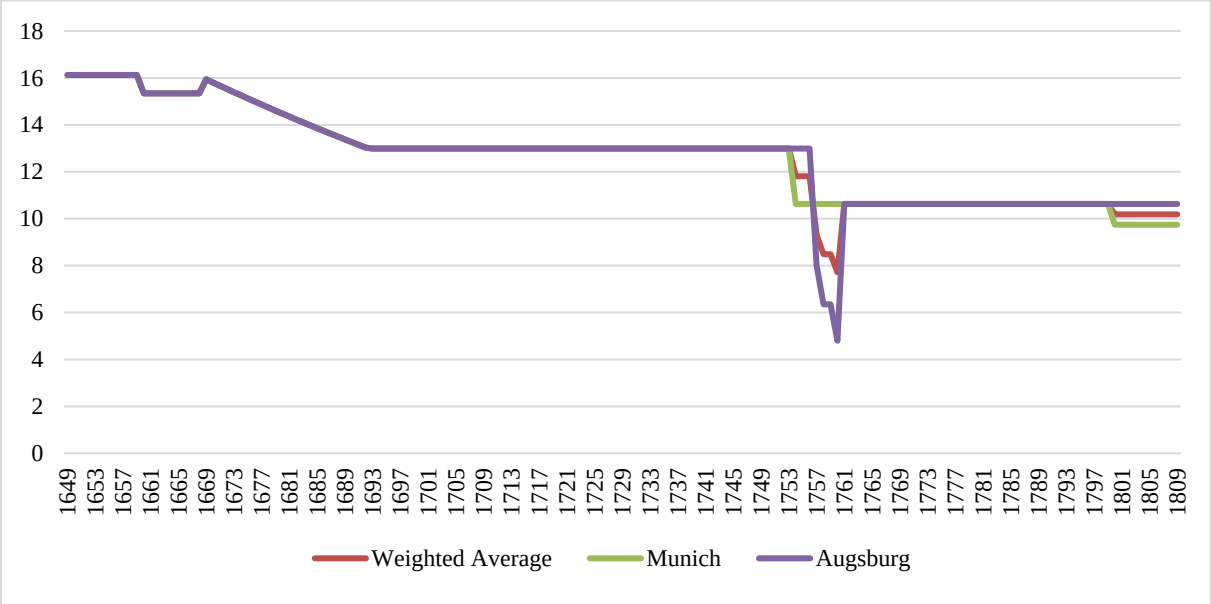

Figure 3: Silver content of one guilder in grams for Munich, Augsburg and a weighted average, 1649 to 1809, own calculation based on data from Pfister (2017).

As there are no conversion rates for Regensburg itself, we compiled an index of two adjacent South German cities, Augsburg and Munich, based on Pfister (2017). There are good reasons these two cities should give us an approximation of the conversion rate in Regensburg. Studies on beer prices indicate that Regensburg was very much integrated into the markets and currency system of the Electorate of Bavaria, the city of residence of which Munich was (Lechner 2008, 156). Even if Regensburg was authorized to mint its own coins, it generally adhered to the monetary policies of the Bavarian Reichskreis and the Southern parts of the Empire (Denzel 2007, 32; Gruber 1999). With Augsburg another city with similar political structure as Regensburg was selected. Both were Imperial Cities, de facto city states with similar economic and monetary policy problems linked to this status. Figure 3 shows the development of the grams of silver in one guilder over 161 years for Munich, Augsburg and a weighted average which was used to convert the entrance fees into raw silver. A slow process of coinage debasement is visible over the century and a half, leaving the silver content of a guilder in the late 18th century at roughly 60% of its value in 1649.

5.2.2 Wages

Undoubtedly, it would have been preferable to use Regensburg-specific wage data, but the only other data available are the very wages St. Catherine's paid to its workers which were duly recorded in the account books. Throughout the 18th century, for example, the master

brewer was annually paid 60 fl. for his work. What makes this number hardly comparable is that we must suspect that much of his actual salary was paid in kind and through gratuitous accommodation (Lechner 2008). In 1815, the retiring master brewer Kaspar Rödelbacher estimated that for his salary, food, fuel and accommodation the hospital had costs of around 700 fl. every year (Lechner 2008, 49). Apparently, only a fraction of the wages of the hospital workers was paid in cash, rendering them incomparable to the entrance fees. Instead, we rely on data from Munich and Augsburg again. From qualitative accounts we have indications that nominal wages stagnated throughout the 18th century in Regensburg, which is roughly captured by our data.

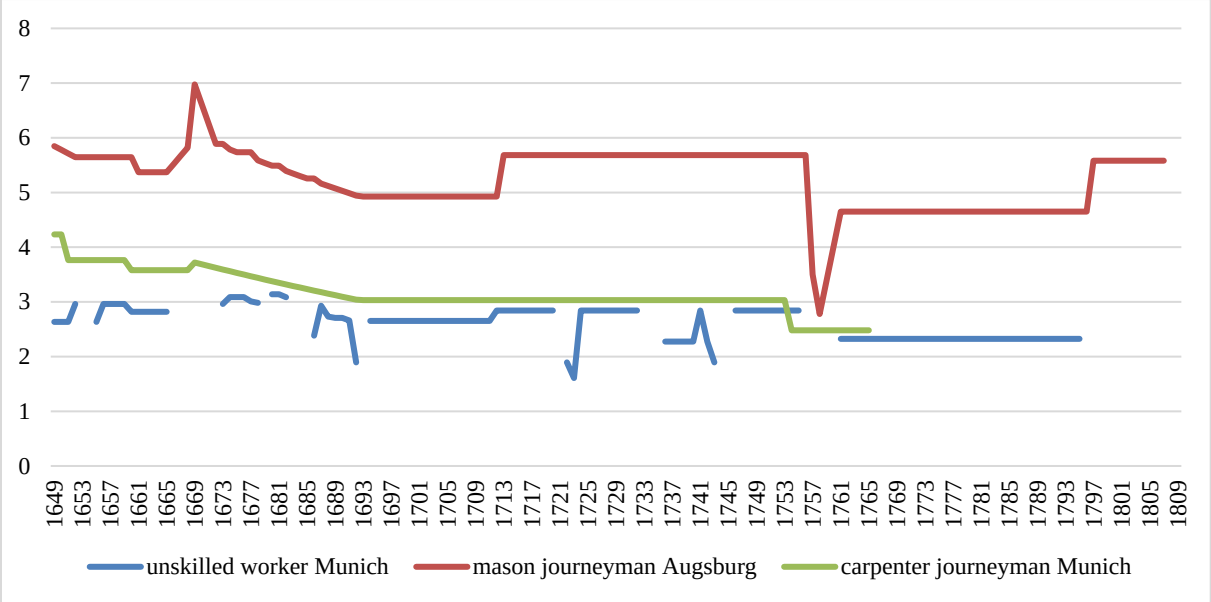

Figure 4: Daily summer wages for three selected professions in grams of silver, 1649 to 1809, own calculation based on data from Pfister (2017).

Even if unskilled laborers serve as the customary point of reference, given the hospital's urban middle-class clientele it is consequential to choose a semi-skilled laborer's plus an unskilled laborer's wage. Therefore, we selected the mason journeyman and the unskilled worker from Munich as they fit in these categories and have roughly reliable time-series. The wage data given above refers to summer wages and is thus not fully representative for estimates of annual income.

5.2.3 Consumer Price Index

As for the wage and silver conversion rates the data for a contemporary Consumer Price Index (CPI) are taken from Pfister (2017). Pfister's basket composition is the same as Allen's (2001). We calculated an equally weighted average between Munich and Augsburg. Yet, since data for Munich are missing after 1775, we are forced to only rely on Augsburg after this point in time. We can do so confidently as in the time span from 1649 to 1775 there is no broader divergence between the two cities. The time-series are characterized by a mild long-run increase in living expenses, experiencing rather high fluctuation.

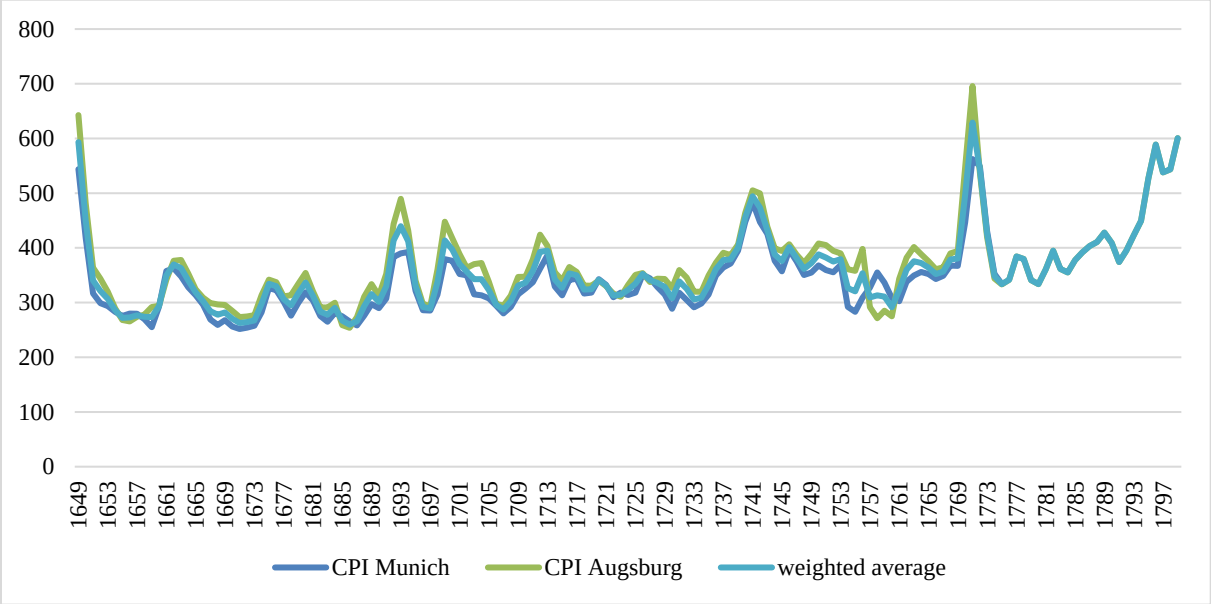

Figure 5: Yearly CPI for Augsburg, Munich and a weighted average of both in grams of silver, 1649-1809, own calculation based on data from Neumaier (2011).

Some Regensburg-specific idiosyncracies had to be omitted. Because of the frequent grain blockades during the 17th and 18th century, the grain price in the city was higher the elsewhere, making up roughly half of daily expenses. Our CPI takes that only roughly into account. It does cover, however, some major price movements. The very inflation of the last decade of the 18th century, which is documented in many qualitative sources from Regensburg, is indeed represented in the index. In the same manner, the slow, but steady increase of consumer prices during the second half of the 18th century it represented in the index, as well (Kühne 2006, 40). It could have been caused by constantly sinking real wages which we find indications for (Schönfeld 1959, 107). An indication that the prices between the Electorate and Regensburg were comparable delivers a study on beer prices which detects very similar patterns. In fact, the residence city de facto set the prices for the remaining cities of the Electorate (rural areas had lower prices), which in this regard included Regensburg (Lechner 2008, 156).

6 Data Analysis

The subsequent chapter will deliver the core of this thesis' work: On the basis of the theoretically established categories, the data of St. Catherine's will be analyzed and, where necessary, triangulated with the data presented in chapter 5.

6.1 Demographic Composition of the Corrodians

It will be commenced with the basic demographic background of the corrodians. In this subchapter age, sex, marital status and confession will be analyzed.

6.1.1 Age and Sex

An analysis of the age structure of the corrodians confirms one of the most basic propositions of this thesis: The main clientele of St. Catherine's were old people. Who was considered (or considered himself) old varied over time, but the mid-50s and the early 60s are certainly within a credible range in the early modern epoch. The fluctuations among the real corrodians are harder to crack: The average age of newly admitted real corrodians was continuously sinking from the 1680s onwards to the 1750s, from the early sixties to only 48 in the 1750s. It can

certainly be ruled out that they can be linked to a general decline in life expectancy over this period. For this they are too momentous and of too high magnitude. Thus, it has to have been due to a change in policy of the hospital.

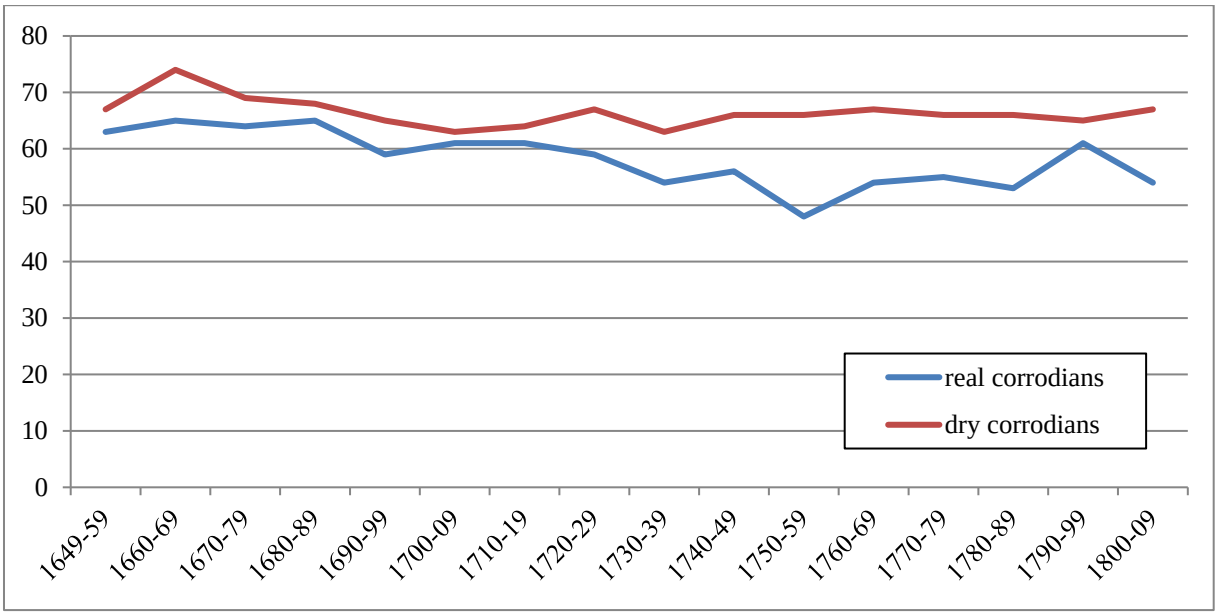

Figure 6: Average entrance age over decade, 1649 to 1809, own calculation based on data from Neumaier (2011).

We know that the hospital faced problems during the 18th century because the inmates had become too frail (and unwilling) to execute the working duties as expected. The corrodians served as a source of cheap labor for the hospital, in particular for maintenance works which were not very skill-intensive the corrodians were obliged to lend a hand. Some of these were expected to be carried out gratuitously, for some small reimbursements were handed out, well below market wages, however (Neumaier 2011, 277). It occurred, however, that this was at risk because there were too few able-bodied corrodians at hand. The Spitalrat then decided to consider the criterion of work-ability more at the next admissions, which could have surely been associated with younger corrodians being admitted. This would, however, not explain why the average age rose again in the second half of the 18th century.

Can this decline of age at entrance (and a roughly corresponding rise in duration of stay, see 6.3) help explain the price developments, given that theory has it as the single most important factor? Did corrodies grow more expensive because younger corrodians lived longer? The timing of the two developments makes this roughly plausible, assuming that the officials reacted with some time-lag. The relation is unfortunately not so simple. Very astoundingly, the average future stay of the age cohort 40 to 45 is shorter than the cohort 50 to 55. This can probably be explained by a function the hospital fulfilled in addition to old age care. It was occasionally used as a shelter for the ill who needed care, even at a very young age. People who entered still in their early 40s could have been in such sick condition, that they lived on average shorter than their older, but lustier peers.

Age cohort	**40-45**	**50-55**	**60-65**	**70-75**
Average life expectancy (in yrs)	12,3	13,5	10,8	5,8
Number of observations	22	54	118	64

Table 3: Average life expectancy of three selected age cohorts, 1649 to 1809, own calculation based on data from Neumaier (2011).

Lastly, dry corrodians have on average a higher age than real corrodians. The divergence between the two time-series even grows for most of the 18th century. This can most likely be

linked to the different nature of a dry corrody compared to a real corrody. Whilst the awarding of the latter was, as can be understood from the supplication letters, much linked to an anticipation of future hardship, the dry corrody was a remedy against immediate and acute situations of emergency. As savings were depleted and frail health conditions aggravated over time, dry corrodians were on average older than their real counterparts.

Looking at the corrdians' sex, it appears that retirement at St. Catherine's had a strong gender dimension. Roughly three quarters of all inmates were female. Firstly and most obviously, it is a commonly established fact that women for bio-genetic reasons enjoy a higher life expectancy than men. Hard physical labor which affected men much more often than women contributed to this. Females were, thus, more often in a position to apply to St. Catherine's, as men might have passed away before even reaching an age where this was considered.

Additionally, women's strategic options were limited: Re-marrying at a certain age was much harder for women than for men, if they had nothing attractive, such as a workshop, to offer to potential grooms. Asymmetrical labor market conditions and the meaning of domestic work for women made them more vulnerable to the risks of poverty than men (Holzwart-Schäfer 2005, 11; Reddig 1998, 2000). The predominance of women was certainly also strengthened by common notions of caritas. The loss of a spouse was regarded an exogenous factor for which a wife could not be blamed: "Widows were the epitome of the deserving poor." (Sharpe 1999, 231). Besold-Backmund (1986, 240) calls them the "paradigmatic case of material hardship". The small amount economic capital a widow might possess could be topped up the the big amount of symbolical capital St. Catherine's gained when demonstrating its charity. From other hospitals we know of a similar preponderance of women (Reddig 1998; Boldt 1988).

6.1.2 Marital Status and Confession

A large portion of the women who entered were in fact widows, as Figure 7 shows. Apart from being a powerful category of charity, widows were certainly rather prone to poverty. In conjunction with the very low number of married corrodians this sheds a light on intra-marital care-provision: Intra-marital care had a strong stance, contemporarily called *adiutorium*. This help and support in case of need was regarded a key duty within a married couple, especially for women (Signori 2004, 232). Our data suggest that old couples were reluctant to apply to St. Catherine's, only when this structure was dissolved through the death of one spouse, people felt more impelled to do so. This tells us much about the relationship between family ties and the decision to seek retirement through the market. Marriage and life in a retirement home seem to have been considered somewhat incompatible. As long as both spouses lived, there seems to have been the notion that a functional familial structure still existed and market-based help was yet out of place. A commercial retirement arrangement seems to have been a serious option once a partner was alone. The rather high number of single individuals confirms this. For Lübeck we know for example that wives could only after the death of their husband apply for a corrody (Schulz 1993, 186). Something similar could have been the rule of thumb for Regensburg, too. This complicates the nexus between nuclear families and commercial retirement. We know that the European Marriage Pattern was rather strong in early modern Germany (Dennison & Ogilvie 2014). Our results suggest that the most important unit of care-provision was the marriage, further family structures such as children or other kin appear to be not of the same importance, a finding which is corroborated that in the numerous supplications the death of a spouse is regularly mentioned, while there are only few traces of children or other other relatives. This could either mean that the absence of larger family structures propelled commercial retirement, as theorized by Zuijderduijn (2015) or that we should focus more on marriage as a care-providing institution than other relatives.

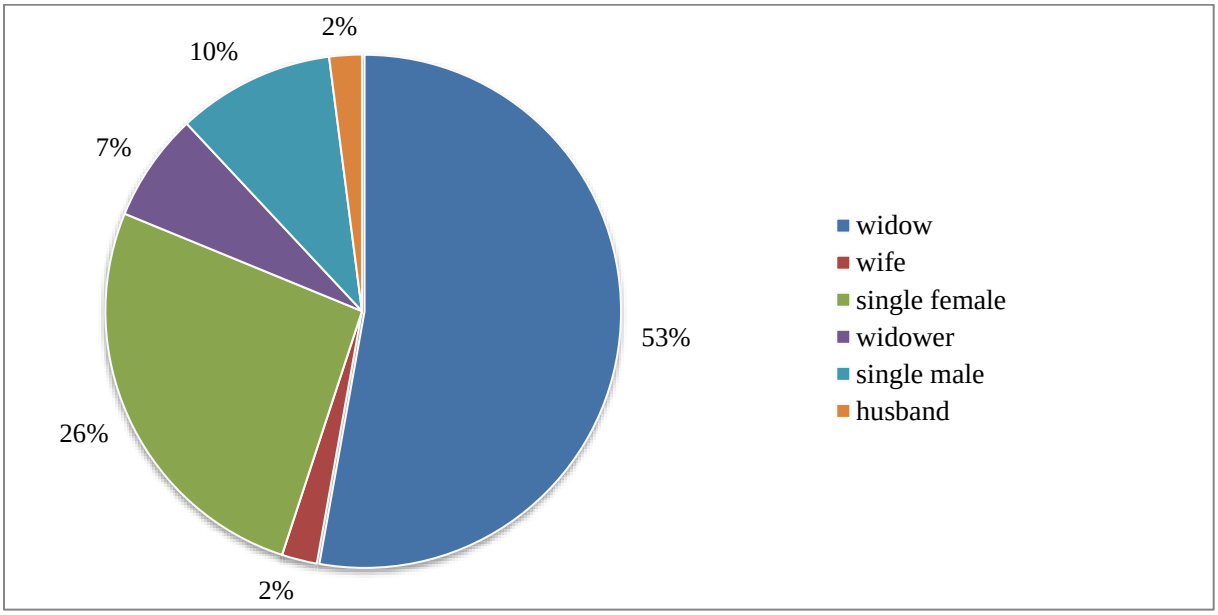

Figure 7: Composition of the corrodians by marital status, 1649 to 1809, own calculation based on data from Neumaier (2011).

Together with sex, confession, in our case Lutheran or Catholic, is the most diligently recorded of the personal characteristics. As explained above, this was a consequence of the very particular bi-confessional construction of the hospital and the violent disruptions of the Thirty Years' War together with the Post-Westphalian conflict prevention mechanisms. Most importantly of these, strict proportionality between the two confessions was observed which was translated into the administrative structure as to that the protestant and catholic bench made only admissions decisions for applicants of the same confession. Out of all corrodians over 161 years, 51% were Lutheran and 49% Catholic. This firstly re-confirms the administrative capacity of the hospital's officials which made it possible to execute policy priorities with high precision.

Secondly, the rigidity of Regensburg's citizenship laws (after 1651) plays out in our favor. Virtually all catholics were banned from holding the coveted citizenship status and only for admission at St. Catherine's passive citizenship was granted. This does not necessarily mean that Catholics could not dwell in the city, it indicates, however, that the urban upper classes, governing the city and steering its important institutions such as the guilds, were of Lutheran confession. Protestants rather came from this economically established urban milieu. In this stylized view catholics were either migrants from the surrounding rural areas and worked in low paying jobs on the urban labor market. We would therefore assume, that confession rather than being a category itself gives us a coarse glimpse on the social strata which converged in old age. So we find evidence that St. Catherine's was a place where apparently people with different backgrounds encountered eachother.

6.2 Geographical Origin of the Corrodians

The availability of commercial retirement has been linked to migration and urbanization. Zuijderduijn (2015, 196) argues that "…retirement homes ... played an important role in such developments as migration and urbanization offered an alternative to family assistance during old age". In fact, we know that the Electorate of Bavaria entered a phase of high within-migration after the Thirty Years' War (Schremmer 1970, 223). Zuijderduijn (2015) does not specify further how the the causal mechanism would most likely run, but two ways are thinkable. Firstly, the young would migrate because the elderly could arrange old age care via the market and could let them go. Since hospitals and with it commercial retirement arrangements are urban phenomena, this would imply city-to-city migration as well as an understanding of

early modern care provision which underlines a larger familial context other than the nuclear family. Upon admission at St. Catherine's many corrodians would state their presumed place of birth which provides us with precious insights in how geographically mobile the corrodians had been in their younger days. Very few of them, however, named cities as place of origin, thus city-to-city-migration appears to be a minor phenomenon at St. Catherine's. The surrounding region of Regensburg was (and is) very rural and had experienced little urbanization. The fact that three quarters of the corrodians are from within 50 km where no other cities existed makes this causal nexus even more unlikely.

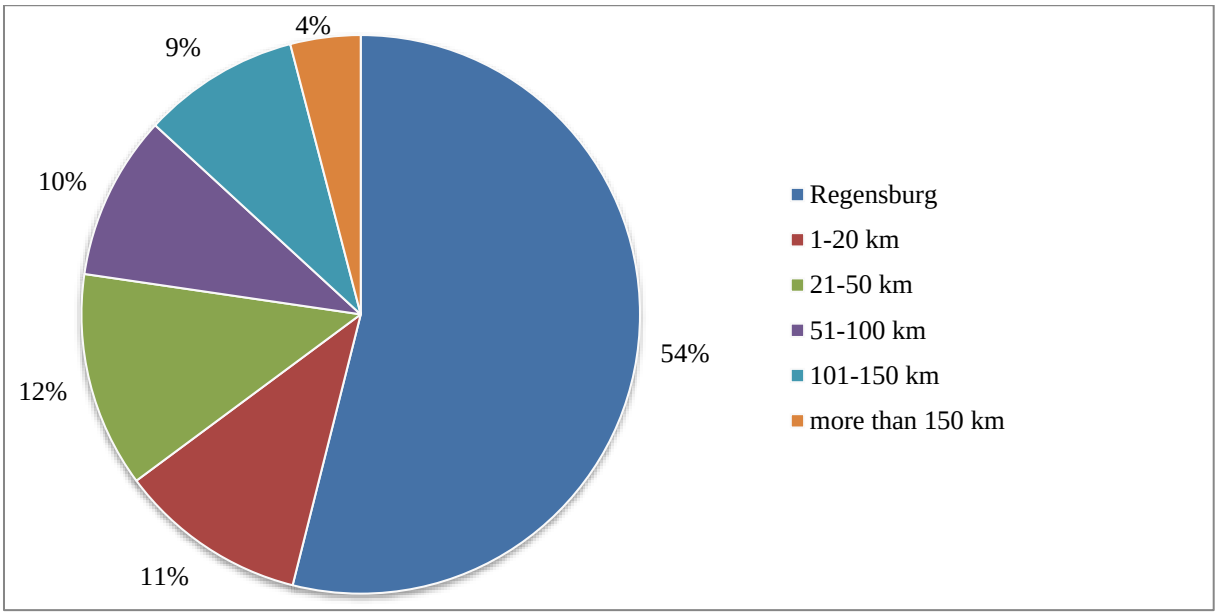

Figure 8: Composition of the corriodians by distance of geographical origin from Regensburg, 1649 to 1809, own calculation based on data from Neumaier (2011).

Secondly, we could theorize that migrants who had come to a city where they did not possess any close kin to take care of them would be inclined to purchase a corrody. In this case the availability of commercial retirement would not be so much a driver of land-city-migration as it benefited from a growing urban pool of people with no option of intra-familial care provision due to childlessness or weakened ties with the place of origin. Neumaier (2011, 186) assumes that the 20% of admission for which no place of origin was noted came in fact from Regensburg as the hospital's scribes could be sluggish with pinning down something as obvious as coming from Regensburg. If a corrodian was in possession of citizenship, it is straightforward that he was local. A significant portion of the corrodians was in fact from Regensburg itself. In light of St. Catherine's status as a "Bürgerspital", a civic institution, this makes sense. About the migration stories of the remaining third we only have anecdotal evidence. Austrian protestants who had fled confessional persecution in their homelands – Regensburg being the closest Protestant territory to them - entered St. Catherine's, making up most of the long-distance migration share. Labor market conditions forced servants - of who we find many among the rows of the corrodians – to a rather high geographical mobility (Neumaier 2011, 189; Becker 1983). For these groups it is very well possible that they opted for commercial retirement at St. Catherine's in lack of any potential care-takers. It is very hard to assess if the total share of non-autochthonous inmates exceeded the city's total, but it could well be so. So in light of this analysis we could carefully support Zuijderduijn's (2015) proposition.

6.3 Occupational and Social Composition

For around 60% of all corrodians admitted occupational titles could be retrieved. For men, this simply refers to the profession pursued, for women we have two options. It is either the father's or husband's profession or the personal profession (as professions are unambiguous this can easily be distinguished). Only a handful of occupational titles could not be safely identified and were thus omitted. We rarely find more than one occupational title, and if this was the case, we counted just the more high-ranking one. This gives an important proxy for the societal rank and position of the inmates as the selection of occupations was heavily restricted by social status and estate. To create comparability between different occupations we had to code the titles into categories. We are well aware that social status is a multi-dimensional concept which can only be translated into a two-dimensional top-down hierarchy with some loss of information. Given that paying the entrance fee was foremost a question of economic affluence, we are advised to apply a coding system which is geared to capture the economic dimension of social status rather well. Thus, we chose van Leeuwen's and Maas' HISCLASS_5, a classification system, which is inherently labor-related (van Leeuwen & Maas, 2002; Mandemakers et al., 2013). It arose as a social-status-related sub-category of HISCO, a coding system aimed at making historical occupational titles comparable through space and time. As we were only interested in the internal stratification of all corrodians, we omitted this dimension. HISCLASS distinguishes between five (plus one residual) categories based on manual or non-manual labor, the skill level, supervisional character of the occupation and primary or secondary sector. All codifications were conducted manually and thereafter compared and harmonized with the large pool of existing codifications accessible with HISCLASS to be in line with general coding practice.

This is important because it tells us who factually entered the hospital. Generally, it is claimed that commercial retirement arrangements were mainly accessed by different variations within the urban middle classes (Dirlmeier 1978, 526; Aspelmeier 2009, 99). For the underclass and the many poor who were certainly in need for old age risk insurance the entrance fee was too high a hurdle, gratuitous admissions being a different category. For the highest echelons of urban society there was either no economic need to do so or the potential loss of social prestige loomed too large. When Zuijderduijn detects that the relative cost of a corrody was rising over time, he concludes that the accessibility of the retirement home tightened up accordingly (Zuijderduijn 2014, 19). Theory would therefore expect a large share of individuals from middle class backgrounds, which, as prices rose in the last two thirds of the 18th century, further squeezed upwards.

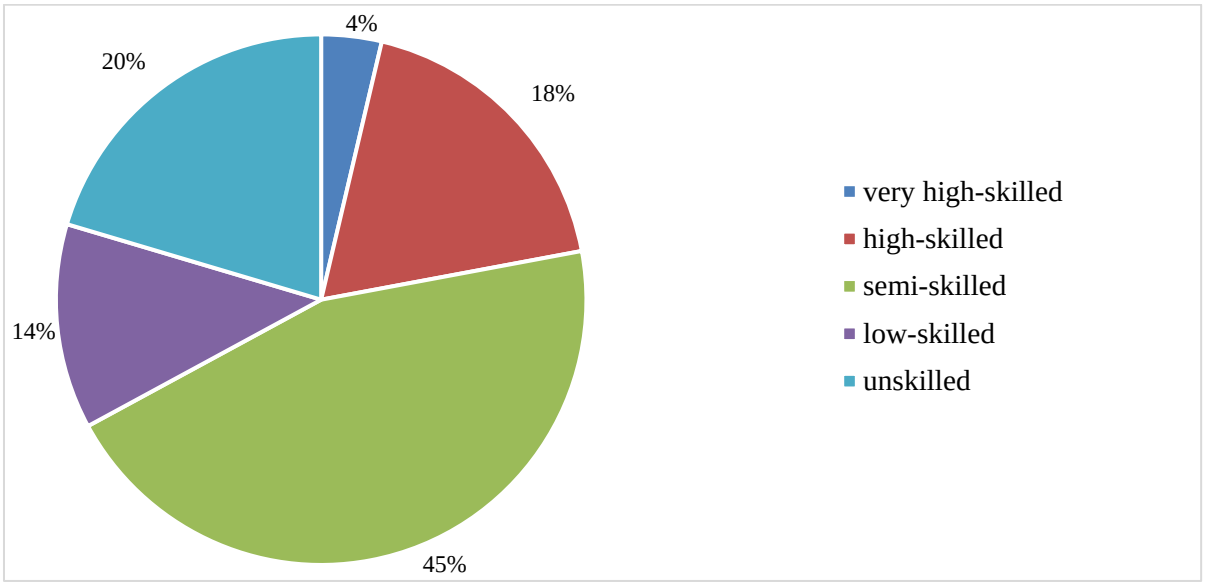

Figure 9: Composition of the corrodians by social class, 1649 to 1809, own calculation based on data from Neumaier (2011).

Figure 9 shows the social class composition of the corrodians over 161 years. The majority is made up by "middle class" occupations comprising mainly regular craftsmen and their widows or affluent peasants. Category 4 largely includes low-skilled laborers such as brewery workers or carters. In category 5 ancillas, day laborers, servants and farmhands are placed, the very bottom of an early modern labour market. Categories 1 and 2 denote a clear skill difference, containing master craftsmen, scribes, merchants and at the very top even a couple of apothecaries and two widows of notaries. Most astoundingly, even if the vast majority is in fact from what in modern terminology is called the middle class, a substantial portion, around a third, of corrodians are from the lower strata of society. The hospital thus appears to have been a place of inter-class encounter where individuals from different strata who had lived apart throughout their life-course encountered eachother in old age, unlike the theoretical expectations. How should this puzzling finding lead us to reconsider our notion of the practice of status differentiation at the hospital? We must recall how difference in status could be expressed within the hospital, so that members of the middle class would still have been able to communicate their supremacy over lower class members even if cohabitating with them. We know that through housing this was possible at St. Catherine's, whilst for diet it was not (Neumaier 2011). In terms of material possessions the possibility to group-distinctinction was rather limited. The corrodian regulations stipulated that corrodians had to give up much of the authority over their belongings upon entrance in the hospital (Neumaier 2011, 440). Under these circumstances it seems critical how individual status could successfully be communicated to the urban public. The forces of uniformity shaping the corrodians' everyday life were powerful.

Before trying to make sense of this it is advisable to inspect the social composition over time. Figure 10 shows the social composition of newly admitted corrodians by decade. A secular trend is hardly discernible: The share of upper class inmates is especially high in the 1650s which can with some uncertainty be linked to the class-indiscriminate effects of the Thirty Years' War. It dwindles over the subsequent two decades and remains very low until the 1740s. For around three decades it remains around 20% to decrease back to roughly 10% in 1770s. The last three decades witnessed a very strong increase up to 40% in the 1790s. Category 3, mainly composed by craftsmen and their widows, is through all 16 decades the most common social background. With one exception it fluctuates between 40% and 60%. Low and unskilled laborers in category 4 and 5 are present in signifcant amounts throughout the 16 decades. The general picture puts us in front of a conundrum: Why did the increase in en-

trance fees, setting in in the 1720s, did not drive out less affluent applicants who could, as old age at St. Catherine's was becoming relatively more expensive, no longer afford to buy it? Zuijderduijn (2014) claims this to have been the general effect of the price rise. In view of Figure 10 the general theoretical assumption cannot be verified. Day laborers and simple workers still made up a substantial part of the hospital's inmates and lived "side by side" middle class groups.

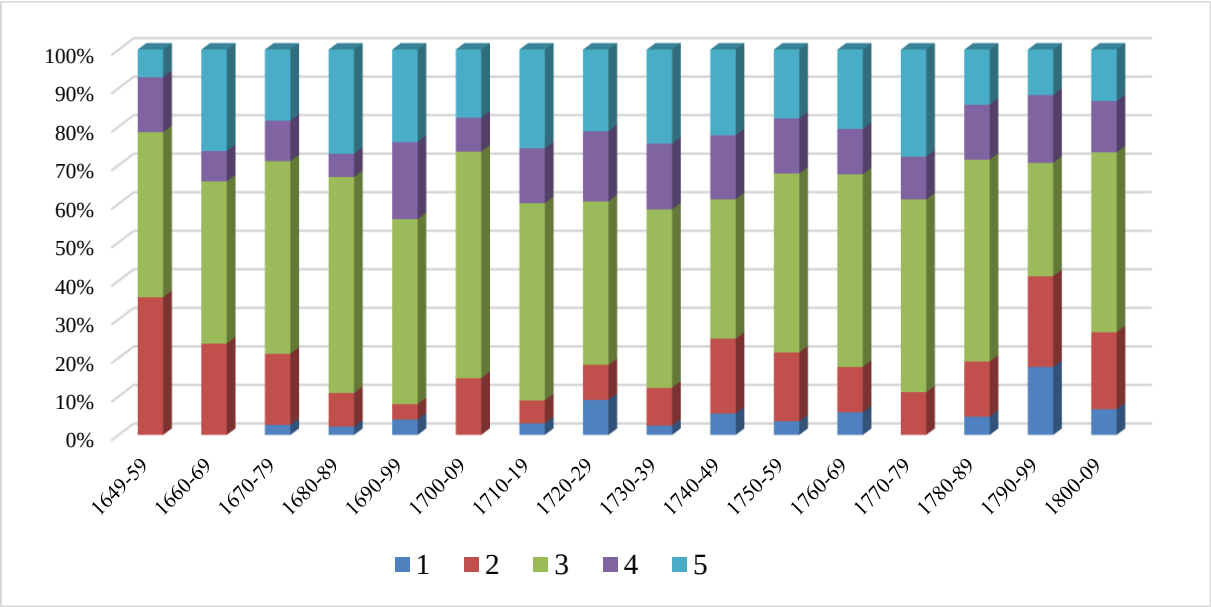

Figure 10: Social status of newly admitted corrodians by decade in percentage, 1649 to 1809, own calculation based on data from Neumaier (2011). Category 1 refers to the highest skill level, 5 to the lowest.

One should, nevertheless, take the different risk profiles of different occupations into account, in particular for the large share of lower class such as servants and ancillas. They were a high-risk group: "At hardly any other place in pre-industrial society the downsides of old age became visible with the same severity as among the menial staff." (Becker 1990, 159). Low pay, the need for high geographical mobility and great dependence on the employer characterized this labor group. Even early 20th century studies document that worries over material living standard in old age were constant in these occupational groups (Becker 1990; Reith 1990). Tellingly, in some cities certain guilds bought corrodies for a portion of their members, in Regensburg the guild of wool weavers had a spot for a comrade's widow at St. Catherine's (Neumaier 2011; Reddig 1998, 192; Haug 1965, 69).

Some particularities of the Regensburgian labor market might have further boosted the ascendece of menial stuff: Through the institution of the Perpetual Diet in the city countless embassies and legations settled in, creating a very favorable labor market for servants (Kühne 2006, 38). At the same time, external craftsmen started to move in the city who were - to the bemoaning of their local competitors - by imperial decree exempted from several municipal regulations. This is, of course, just a hypothesis which cannot be verified, but the particular situation might have created a trend of upwards mobility for servants and downwards mobility for local craftsmen who thus met at St. Catherine's at the end of their lives.

6.4 Duration of Stay

How long would corrodians live at St. Catherine's until they died? The average duration of stay at St. Catherine's shows a hefty amplitude, it effectively doubles from the 1680s to the 1730s at almost 14 years. Until the end of the 18th century the figure stabilizes between 11 and 12 years of stay. Comparable studies for the Low Countries find similar durations of stay for the Dutch hospital St. Jorishof in the 18th century (Zuijderduijn 2014, 15). Interestingly, the

mortality crisis of 1713/14 does not show much in the average duration. For the cohort 1700-09 we find unexpected stagnation compared to 1690-99, although the average duration had been rising strongly beforehand, which is likely a sign of the plague. The high losses of the crisis were replaced by new inmates in 1714 who possessed a high-above-average duration of stay, because of which the decade 1710-19 does not exhibit signs of the catastrophe. It remains unclear why 17th century corrodians lived such short lives at St. Catherine's. Checking for a series of mortality crises which could have regularly wiped out a good portion of the corrodians, we find meager evidence. Hardly anything that could justify such low life expectancies. Since we know that the average life expectancy in the early modern period did not change substantially, the amplitude cannot be understood through general demographic trends (Shahar 1993). It must have been a change of admission policy.

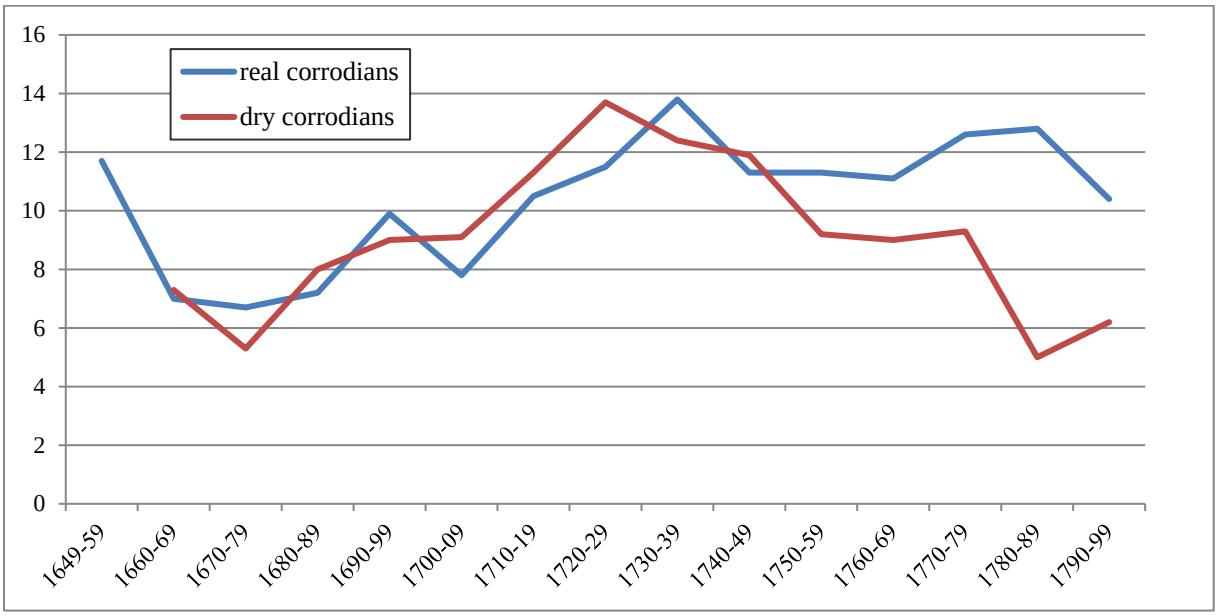

Figure 11: Average duration of stay of all newly admitted corrodians in years by decade, 1649 to 1809, own calculation based on data from Neumaier (2011).

As elaborated above (see 3.6), the longevity of the corrodians was an economically vital question for the hospital. The duration of stay is, of course, linked to the age at entrance. It is very likely that the long trajectory of sinking age at entrance (see 6.1.1) from the 1680s well into the middle of the 18th century contributed to the surge in average duration of stay. Accordingly, one could theorize that strengthening the hospital's workforce might have played a role. Both time-series are yet far from being entirely synchronous, so there might have been a relation, but not all is explained. The effective doubling of the duration of stay among real corrodians could provide us with a clue as to why the the corrody prices underwent a secular rise after the 1720s. In this explanation the hospital's leadership would have identified the rising longevity of the corrodians and reacted by recalibrating the relation between entrance fee and expected longevity. This effect could have had a significant time-lag, so temporal difference could be explained here.

6.5 Development of Corrody Prices over Time

We have to treat the data with due caution: These are yearly averages of all corrodies purchased that year, not fixed market prices. Thus, the high year-to-year fluctuation does not indicate that it was theoretically more expensive, but that it de facto was. In addition, the number of yearly admissions can be very low, rendering the average prone to potential distortion. We should thus be careful with deductions from the graph and focus on clear signs, which we then can interpret with due confidence. Nevertheless, three developments are unequivocally visible: Firstly, a long-term rise in the entrance fees, secondly, a structural break in the 1720s

which contrasts a long and stable low-price period (1649 to late 1720s) and an equally long high-price period (late 1720s to 1809) and thirdly, a considerably higher degree of year-to-year fluctuation in period II.

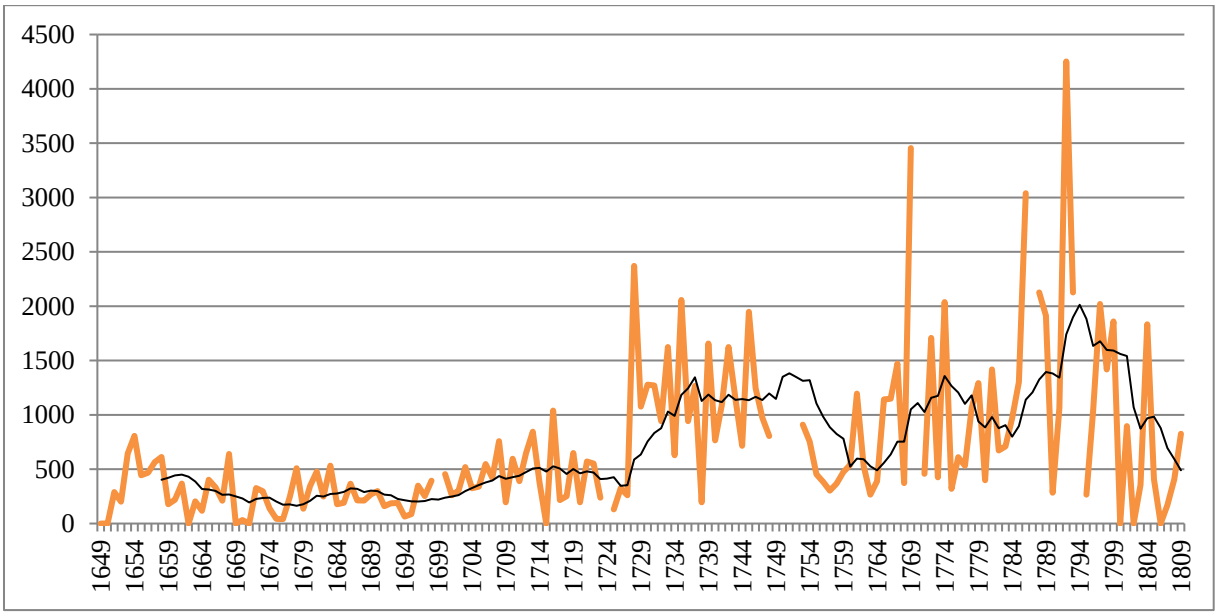

Figure 12: Yearly average of corrody prices in silver grams with a 10-year-moving average, 1649 to 1809, own calculation based on data from Neumaier (2011).

Which factors can explain observation I, the long-run increase in entrance fees? The first suspects are the age at entrance and the duration of stay (see 6.1.1 and 6.4). Of both we know, that developments which should theoretically lead to higher prices, longer stays and lower ages, prevailed in the last decades of the 17th and the first decades of the 18th century. Age at entrance dropped then, but longevity stayed at a rather high level. The data roughly match, so rising costs through longer stays were very likely passed on to the applicants. The long-term rise does also generally go in line with the curve of interest rates which had been on steady decline during the early modern period (Zuijderduijn 2014, 17; Epstein 2000). The hospital would have had to compensate losses through sinking interest rates by higher entrance fees, this argument goes. There is, however, no clear evidence that St. Catherine's hospital reinvested the entrance fees in order to cash the returns. Another ambiguous story are the rising costs of living. The Consumer Price Index in 5.2.3 depicts this secular development very well. The argument that the rising expenses would have driven up corrody prices (Zuijderduijn 2014, 17) does not fit very well with St. Catherine's yet. The hospital could through its vast estates produce much of the food stuffs needed to feed the corrodians itself and would as a net producer rather have thus benefited from rising costs of living. This, of course, does not rule out that the hospitals partially adapted to the new price environment by passing some of the costs on the corrodians. Chapter 6.3 shows us that the demographics entering the hospital did not change systematically over the long term, so a newly found clientele can most likely be ruled out. This leaves us some evidence, but not all could be explained.

Secondly, a structural break towards the end of the 1720s is discernible at first sight, is visible. From 1640 onwards corrody prices had experienced remarkable stability at a rather low level for some 70 years, but since the late 1720s the prices rose and then stabilized on a much higher level. What could have caused such a sudden change? The transition seems quite abrupt which could indicate that a policy change rather than a secular development is responsible. Our wage data and the Consumer Price Index record no peak, rupture or any atypical movement in the period of question, so a price shock or else is unlikely. Neither Gumpelzhaimer's city chronicle (1838a) has anything in store for the 1720s which could pos-

sibly explain the abrupt rise. For 1726 we know of a "Theuerung", inflation, but the scale seems unable to have caused such a long-term change in policy. We find some changes in the high-ranking officials of the hospitals, but it is very dubious that a new Spitalmeister or new hospital coiinculmen could have brought about such cutting change. For the second half of the 18th century there are numerous sources which point to a prolonged economic crisis of the hospital which led to extensive cut-backs, even among the corrodian's maintenance (Neumaier 2011, 70). In the later 18th century calls for higher entrance sums were frequent, it could be theorized that this was an issue even in the 1720s and the hospital's leadership decided to take action already then and the topic resurfaced later since the policy had not been striking enough. This is the only semi-resilient evidence which could provide us with clues as to why the hospital's officials abandoned a long-established practice and started demanding higher entrance fees. It speaks yet in favor of the adaptability and the administrative capacity of the Spitalrat that they could swiftly break the path-dependence in pricing.

Thirdly, the rather high fluctuation in the second period. As discussed above, the calculation of yearly average is prone to distortions because of low numbers of observations. Yearly admission numbers steadily dropped throughout the 18th century, so the data base is more vulnerable to skewed results. In addition, the rise in corrody prices contains two dynamics: A strong increase of a low number of cases and a weaker increase by the majority of cases. The variance between sums paid in a time period is thus rather high in the second period. Apparently, single corrodians were willing to pay sums that were far off what everybody else would be able to pay. The fact that these cases are scattered contributes to the high year-to-year fluctuation.

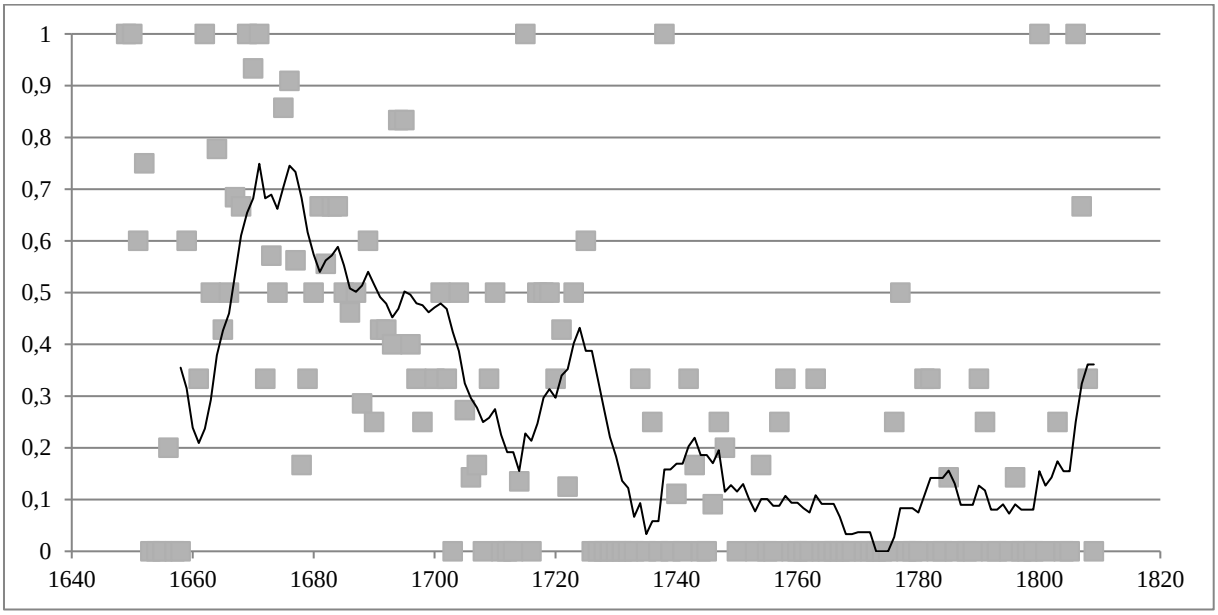

Figure 13: Annual gratuitous admissions in percentage with 10-year moving average, 1649 to 1809, own calculation based on data from Neumaier (2011).

Figure 13 adds an interesting new perspective to the structural change of the retirement business at St. Catherine's. It depicts the yearly percentage of gratuitous admissions over time. Gratuitous admissions themselves are a phenomenon that contradicts an idealtypical notion of completely commercialized retirement and there were still significant amounts of admissions "for God's will". The motivations of charity, reward and commercial gain mingled as much as the hospital remained a multi-functional institution. We see that the percentage of yearly gratuitous admissions dwindles in the long-term (with short exception in the 1650s) up until the tumultuous start of the 19th century. In conjunction with the development of entrance fees this suggests that the way corrodies were handled at St. Catherine's was increasingly commercial-

ized, as charity as a motive, which we can assume as the main driver behind free corrodies lost its importance.

Table 4 shows the cost of retirement expressed in daily wages of a mason journeyman and an unspecified unskilled worker (for further description see 5.2.1). It has to be noted that these are summer wages, when the pay was better than in seasons when the demand for labor was lower. The yearly income is customarily calculated 50-50 between summer and winter wages, for the latter we have no data. The wage prices tell the same grand story of a strong increase in corrody prices from the 1720 onwards. The distance between the wages seems to remain constantly at roughly a rate of 1 to 2.

Time period	**Semi-skilled worker**	**Unskilled worker**
1649-59	58	117
1660-69	45	91
1670-79	27	52
1680-89	56	102
1690-99	48	93
1700-09	90	168
1710-19	76	148
1720-29	129	272
1730-39	222	482
1740-49	198	419
1750-59	152	282
1760-69	223	446
1770-79	227	454
1780-89	312	623
1790-99	258	551
1800-09	113	-
Total	**140**	**287**

Table 4: Average entrance fee by decade expressed in daily summer wages for a semi-skilled and an unskilled worker, 1649 to 1809, own calculation based on data from Neumaier (2011) and Pfister (2017).

How do these data compare to other hospitals? The period of time, 1649-1809, makes the search for adequate subjects of comparison tough, as most of the German corrodian literature is late Medieval or 16th century in its focus. For a group of Dutch hospitals, Zuijderduijn (2014, 14) finds that in the 17th century the corrodies cost on average 350 daily wages for a commensalen (St. Catherine's was probably inbetween the more Spartan Commensalen and the luxurious Proveniers). A semi-skilled Regensburgian worker could instead carelessly retire for on average 47 daily wages in the second half of the 17th century. The cleavage between the Dutch hospitals and Regensburg's St. Catherine's seems tremendous, the fact that we account only for semi- and unskilled laborers instead of skilled laborers adds to this. In other words, corrodies were dirt cheap compared to the economically very prosperous Low Countries. The gap shrunk somewhat during the 18th century when St. Catherine's entrance fee quadrupled up to on average 189 daily wages, still well below the 500 daily wages the unfortunate elderly from the Low Countries had to scratch up. Zuijderduijn contends that the price increase drove lower middle class corrodians out and pushed the social composition upwards where people could keep up with the rising prices. Given that St. Catherine's corrodies were so much cheaper it appears in this perspective it was no wonder that un- and low-skilled workers could in the first period enter the hospital (see 6.3). It was probably still affordable to those who had been savy enough to save some of their meager wages. The high number of servants under the favorable labor market conditions would have contributed to

that. The corrodies seem to have been so cheap that even when prices started to rise the lower strata could keep up and still enter the hospital in significant numbers.

6.6 Profitability of a Corrody

If the admission of corrodians was a lucrative source of revenue is, as discussed above (see 3.5) contentious. A major problem in the discussion is that it it very hard to assess all the costs the maintenance of a corrodian inflicted to the hospital. This is especially so in the case of St. Catherine's when most of the food stuffs were home grown and we would have to account for production costs instead of market prices. Beside food, the corrodians consumed fuel to keep their chambers lit and heated and they were provided with basic furniture and linen, occasionally even clothing. Labour costs incurred for the kitchen personnel, the administration and for example brewery workers. Administering the daily supply of goods and production for the corrodies's consumption was, of course, interwoven with other working processes. The abolition of the kitchen at the hospitals in 1790s due to high costs shows that the officials recognized the high administrative costs and could take measure to lower them.

In turn, corrodians would carry out small labors with below-market or no reimbursement, the hospital potentially earned interest rates plus, of course, the entrance fee itself. Given the complexity of the calculation one is better advised to look for contemporary calculations then trying to reconstruct all of the above. Luckily, Treiber (1976b) claims to have found a suchlike calculation even if the original source she refers to is at the moment unavailable. She contends that in a listing around the year of 1790 the hospital ascertained that 67 guilders had to be paid per capita annually. As pointed out, we have to be skeptical to what extent all costs, for example the opportunity costs for products given to the corrodians instead of being sold, were duly taken into account.

If we believe Treiber, we should be able to get an idea, how the corrodies were priced in the years from 1785 to 1795 where prices and silver content can be assumed to be similar. Just looking at the ratio of entrance sum and years stay at St. Catherine's, the corrodies seem grossly underpriced: In only one out of 29 cases the hospital would have actually earned something from the sale: When Thomas Lauberger entered St. Catherine's 1786 he gave 350 guilders. Passing away only three years later, Lauberger would have brought the hospital some 150 guilders as revenue. The vast majority is far off from the zone where the hospital could even hope to cover its expenses. For example, the catholic brick worker Johann Heinrich Röhrl granted admission in 1795 would live on for 9 years. Having paid only 20 guilders upon entrance, the hospital would have lost some 580 guilders. In only these ten years the hospital would have made losses of 13.410 guilders. Admittedly, costs fluctuated over time, but if the source Treiber refers to is roughly be trusted, St. Catherine's was massively underpricing its corrodies.

As Bell and Sutcliffe (2010, 149) point out, a theoretically sound profitability analysis is extremely hard to conduct on the basis of incomplete data. We have as a point of reference only the Consumer Price Index which was, as explained above, different from the costs St. Catherine's had. It gives us solely a rough estimate how expensive life outside the hospital's walls was. What we can do is compare the relationship between the corrody prices and the prices for normal consumers and investigate whether that is sensible. The average entrance sum for the time period 1649-59 is around 330 grams of silver which roughly equals a yearly CPI of that period. The average life expectancy for a corrodian in these years was, however, some 12 years. Could St. Catherine's provide for all necessary goods for only around 8% of what life outside cost? Even if we take into account that home-grown products were much cheaper for the hospital, it is hardly credible that they could be so much cheaper. St. Catherine's had for example labor costs and served a diet that was well above a bare bones CPI. This is no hard

evidence, but serves as an indicator that corrodies at St- Catherine's were underpriced. The discussions within the hospital's council over raising prices in the last quarter of the 18th century probably mirror this awareness.

6.7 Corrody Prices by Group

How do the prices now refer to different groups among the corrodians? Did some systematically pay more than others? If we observe these movements over time, we have to be reluctant with the interpretation because of the low number of observations and possible distortions. Only if a trend is visible over a longer period we can interpret it confidently. Accordingly, large and clearly distinguishable groups had to be chosen, such as occupational categories, sex, age and confession.

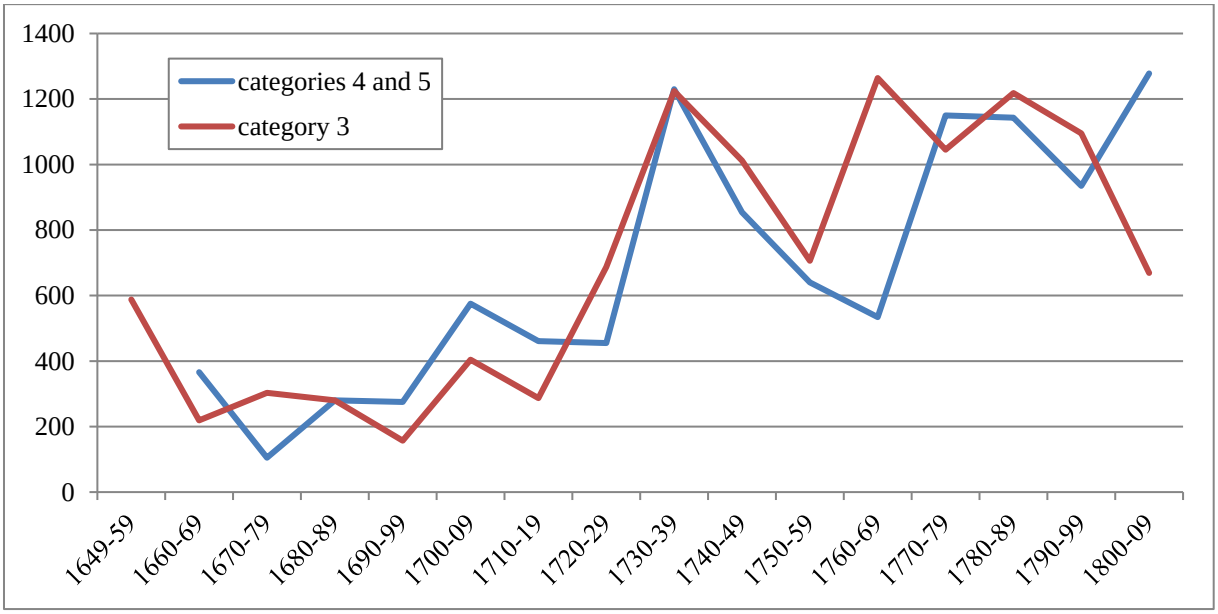

Figure 14: Average corrody prices by decade in silver grams for new corrodians from categories 4 and 5 resp. 3, 1649 to 1809, own calculation based on data from Neumaier (2011).

Firstly, we test if the rich paid more than the poor. We grouped low and unskilled workers together and compared them to middle class corrodians from category 3 - as seen in Figure 15 - in order to see if the theoretical propositions of individual wealth as a determinant of corrody price holds true for Regensburg (see 3.6). To our surprise, it appears that applicants from low skilled and semi skilled professional groups did indeed pay roughly the same amount.[15] The divergences over time seem unsystematic and due to circumstantial factors. There clearly was no discount for poor individuals and when prices rose, they kept pace.

Even for a sex difference we have theoretical support as well as some empirical insight from Zuijderduijn (2014). The picture in Figure 16 is a little bit more ambiguous, but permits the cautious conclusion that the same was true for St. Catherine's. With one notable exception in the 1740s women paid always less then men, a gap that roughly widens in the 18th century. The female price was much slower to react to the price rise of the 1720s, it is in fact a manly phenomenon in the first phase. This is largely due to sex, even if we cannot completely rule out that some correlated variables such as marital status caused parts of the effect.

[15] For the last decade 1800-09 we have so few observations, so we should be fine to disregard this outlier.

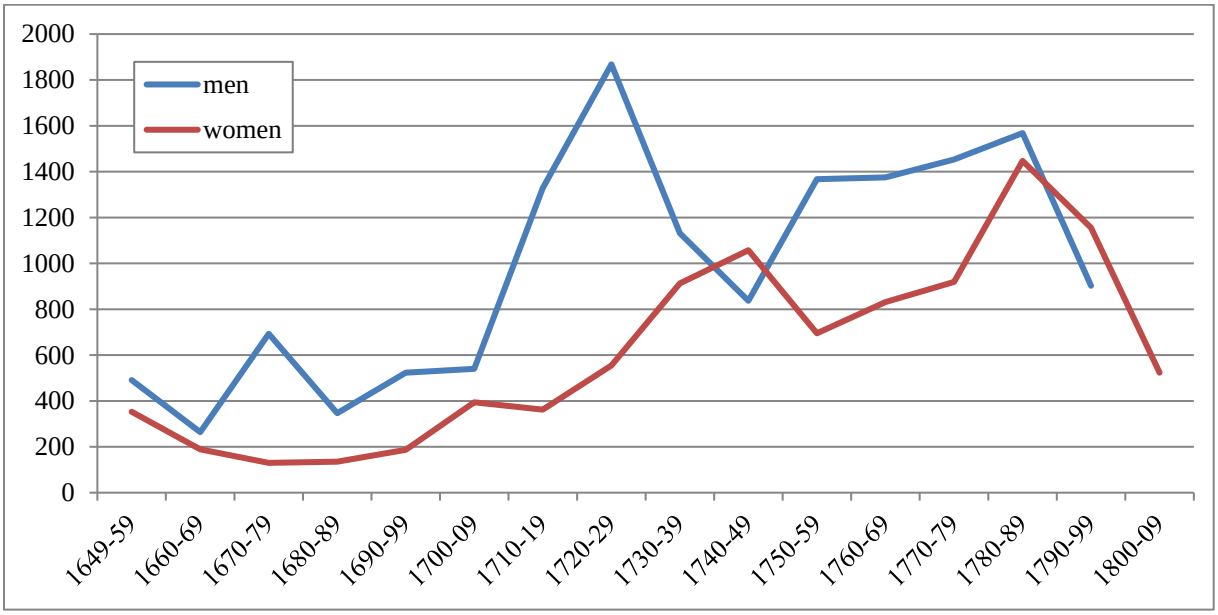

Figure 15: Average corrody prices by decade in silver grams for new corrodians of different sexes, 1649 to 1809, own calculation based on data from Neumaier (2011).

The penultimate sub-groups to be compared are the two confessions. As explicitly bi-confessional hospitals were rare in the age of confessionalization, our theoretical apparatus has little to say about possible price differentials between confessions. Discriminatory effects were not possibly, as the admission committee was different for both. With Figure 15 we have controlled for a class bias between the confessions, which we can rule out now.

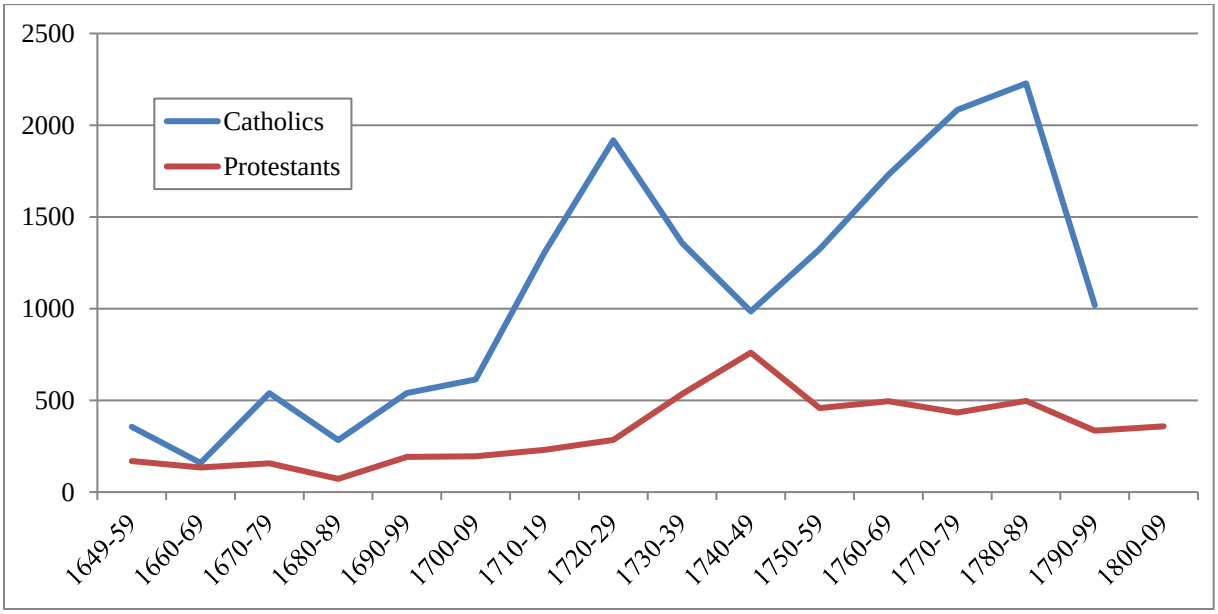

Figure 16: Average corrody prices by decade in silver grams for new corrodians of different confession, 1649 to 1809, own calculation based on data from Neumaier (2011).

We find considerably different patterns. Catholic corrodians had to pay much higher entrance sums than their Lutheran peers. We even see that much of the price rise of the 18th century was in fact carried by Catholics, even if admission numbers stayed equal the whole time. For Protestants corrody prices were rather predictable, as large-scale changes mostly lack, for Catholics instead it was seemingly a question of the time of retirement which was decisive for the pricing. Even citizenship status was unlikely the decisive factors, because passive citizenship was granted to every corrodian after admission. There is, however, one distinct difference. The Catholic system of care provision was much weaker than the municipal-protestant

in Regensburg (Neumaier 2011, 229; Kröger 2006). All the other corrodian-institutions were municipal and therefore under Protestant leadership. It could have been that so Catholic demand for corrodies at St. Catherine's was much stronger than among Protestants, pushing up the prices to a level much higher than what Protestants had to pay. In addition, the divergence in price sheds critical light on the effect of macroeconomic factors which should play out equally for all groups.

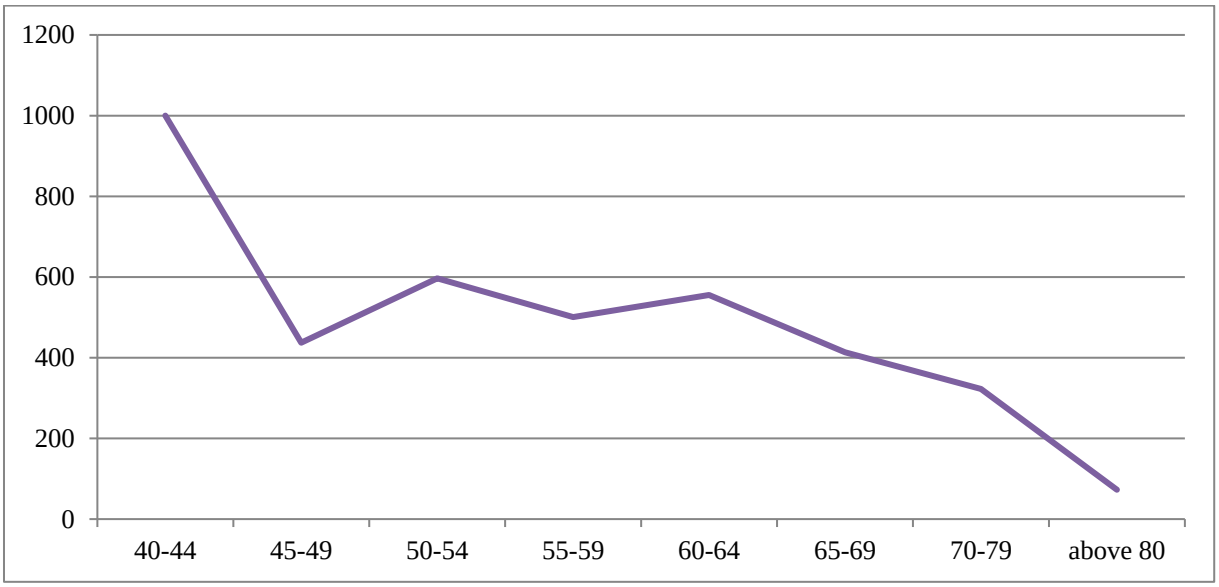

Figure 17: Average corrody price by age cohort in silver grams, 1649 to 1809, own calculation *based on data from Neumaier (2011).*

Lastly, we inquire the age effect, posited so prominently by the theoretical literature by calculating average entrance fees for eight age cohorts. Above the age of 60 we observe a coarse form of the age effect, lowering entrance fees. Under 60 there is no really clear pattern discernible, yet we have noted above that disease and disability played a big role among "younger" applicants. Cum grano salis, we can thus claim that this holds true for older age cohort when the assessment of life expectancy could become more approximate.

6.8 Charitability, "occupational pensions" and recommendation letters

We often find that together with an occupational title it is particularly noted that a corrodian resp. her husband or father worked for St. Catherine's hospital**.** We know that corrodies were also granted to elderly workers, mostly servants, a reward for their years of service (Bell & Sutcliffe 2010; Tillotson 1974, 131; Aspelmeier 2009, 101). The hospital's officials occasionally used the corrodies as a tool to reward reliable and hard-working laborers, as it seems. This was certainly not true for every laborer at the hospital, but we can imagine that the Spitalrat would look very favorably at an applicant who had earned merits for the hospital and whose character and conduct would not cause any unpleasant surprises. This could in fact be a hybrid form of both where a discount instead of a completely gratuitous admission was permitted. According remarks we find for only around 6% of all corrodians. We created a dummy variable for when this was mentioned in the records. However, not only St. Catherine's as a former employer was included. The pattern of these notes indicates that there was a network of Catholic institutions in and around Regensburg which would support an application of their former employee. The admission decision for catholic applicants were, as noted above, made by the clerical bench which was composed of clerics from the Bishopric who enjoyed well-

established contacts with the city's other catholic institutions, the abbies Saint Emmeram, Ober- and Niedermünster. Securing subordinate people one of the coveted spots at St. Catherine's was certainly a form of patronage, as well.

A former employer was not the only additional information that coud be added. Occasionally, charitable attributes were recorded by the hospital's scribes when books on corrodians were kept. We find remarks such as "disabled", "has three little children" or "ill for six years" which clearly appeal to a shared notion of neediness which is explicitly expressed unlike implicit allusions such as for widows. They give us a precious look in which periods neediness was considered an important attribute for applicants and when less so. Thirdly, recommendation letters ought to facilitate admission were recorded. Persons of high status, many of them envoys at the Perpetual Diet, but not only, would send them to support the admission of a worker who had managed to win his master's favor, most likely through long years of loyal service. The hospital was interwoven with the city's political elites and integrated in its power structure and could therefore prove to be a player in networks of personal patronage and favoritism.

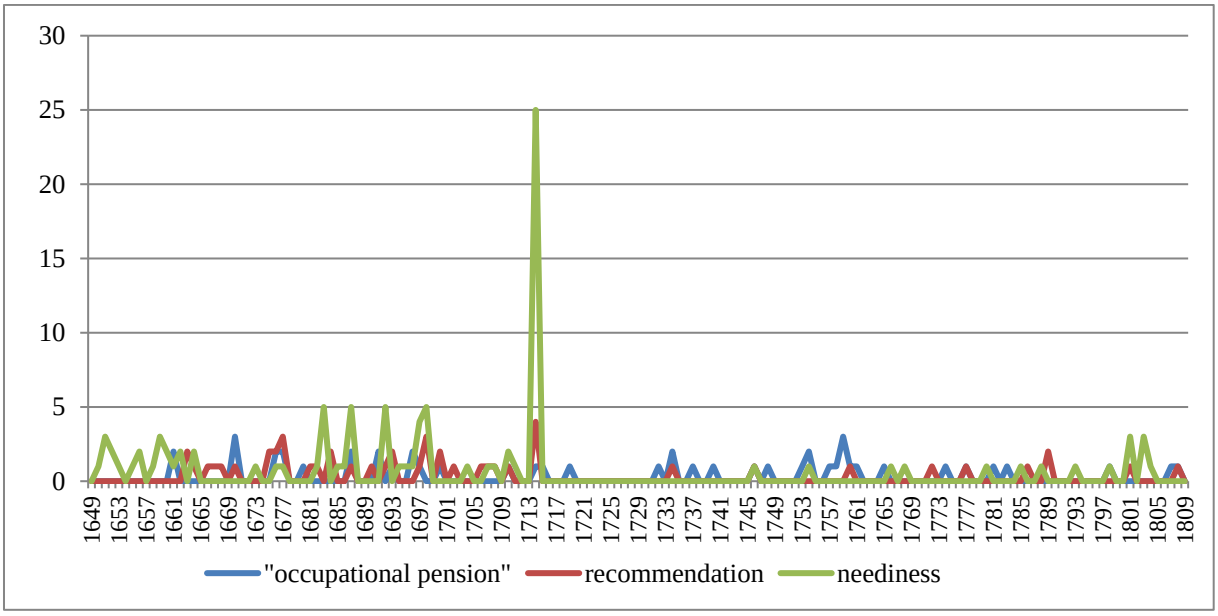

Figure 18: Yearly occurrence of the three given indicators in absolute numbers, 1649 to 1809, own calculation based on data from Neumaier (2011).

Figure 18 shows the frequency of the three factors over time. It is discernible that the occurrence clusters in certain periods which might lead us to conclude that certain practices changed over time. The fact that we can link many spikes to actual events should encourage us to ascribe them to them rather than habits of recording or fragmented preservation. This cannot, however, fully be ruled out. Above all the the enormous spike in neediness after the epidemic of 1713/14 stands out. It suggests itself that the hospital was flooded by applicants who had lost their next relatives or/and were in frail health conditions after a third of the city's population had fallen prey to the Black Death (Kellner 2005). In light of other external shocks we can try to shed some lights on possible reasons of other spikes. For the early 1680 Gumpelzhaimer's chronicle notes a famine, inflation, a devastating flooding as well as increased transit of soldiers to the battlefields of the Great Turkish War (Gumeplzhaimer 1838a, 1402-7). For the early 1690s we know of a major hunger crisis which affected large parts of the continent. Gumpelzhaimer seconds this by his report of bypassing soldiers, inflation, a trade blockade as well as an outbreak of disease in 1693. The quasi-disappearance of neediness might also re-tell the story of increasing commercialization, suggested by entrance fees

and gratuitous admissions. Neediness and charity lost importance as criterion for admission and were thus only rarely recorded, it seems.

Most of the recommendations cluster in the 50 years from 1664 to 1714, after this only very few incidences are noted. The practice of rewarding servants with recommendation letters to St. Catherine to facilitate their admission obviously got out of use. The Perpetual Diet of Regensburg the envoys of which were among the most frequent authors of recommendations was instituted in 1663. This surely explains why the practice set in, why it terminated almost entirely after the 1710s remains unclear. We know that servants continued to be admitted to the hospital (see 6.3). All three indicator demonstrate how neatly the hospital was embedded into its urban surroundings and how vividly it interacted with its environment. Even events and institutions which seem distant from the hospitals can in fact impact the corrodian business through unexpected channels.

7 Conclusion

How has this study expanded our knowledge about commercial retirement in the preindustrial world? It was able to draw an unparalleledly detailed picture of socio-economic aspects of a German corrodian-institution. We understand more of the environment Joseph Balthasar Undeshagen so desperately wanted to leave. We know now that his peers were overproportionally old women lacking immediate family ties such as widows and old maids. This is a general confirmation that family ties were crucial for the individual decision to retire by means of the market, but gives us still to reason which role we should assign to marriage as a unit of care in the theory on the link between commercial retirement and the evolution of family ties. Commercial retirement had in fact a strong gender-dimension, too. The fact that strict parity between Lutherans and Catholics was successfully enforced over 161 years documents that the administrative structures were effective and policy goals could consistently be followed through on. St. Catherine's was also a place of newcomers: Around a third of whose birth place we know of was from further than 20 km away from Regensburg which strengthens the theoretical bonds between migration and demand for commercial retirement. Likewise, it was a place of encounter between different social classes, as significant portions of the inmates had either a lower or middle-class background. Corrodian homes were apparently much more open than the narrow image of middle class-institutions drawn so far contends. Making Undeshagen's choice even more incomprehensible, the hospital was also a place of a relatively high living standard. We found that corrodians lived very well, maybe better than some of the corrodians had during their working life thanks to the production on the extensive estates. Their daily calory intake exceeded Allen's "passable living basket" by 50%. St. Catherine's experienced a process of commercialization of the corrody sale throughout the 18th century: The prices charged rose sharply in a short period of time after the late 1720s and the number of gratuitous admissions collapsed. We have, however, evidence that the sale of corrodies was not profitable for St. Catherine's, thus on average corrodies were probably underpriced. It is well possible that since the corrodian business which made up only some 5% of the budget, it was cross-financed by much larger revenue from land rents. What has come out as a striking feature of the analysis is that corrody prices were often distinguished by groups which should lead us to reconsider the balance of time-variant macroeconomic factors in relation to time-variant personal factors on the pricing. Macroeconomic long-run developments of interest rates and living costs can give us general direction as to where price trends ought to go. Time-invariant, person-related factors give us a more precise picture: As theory predicts women paid on average less then men, probably due to income and popular notions of charity. Additionally, we find an admittedly coarse nexus between age and entrance fee in the pricing of

corrodies. Personal wealth or class background did apparently not play a big role, we find that low-and semi-skilled applicants roughly paid the same amount. A great divergence we find between Catholic and Protestant inmates. A good portion of the price rise can in fact be ascribed to the divergence between Catholics and Protestants. A good indication why this is so could be the urban landscape of care-provision in Regensburg which offered several municipal-protestant corrodian-institutions, but very few for Catholics, leading to much higher Catholic demand for spots at St. Catherine's. What is it that we need to know more about? To impose order on the confusing diversity of corrody policies it would be a crucial first next step to develop a typology of how the sale of corrodies was handled, such as typologies for hospitals in general already exist. The theoretical material presented in chapter 3 provides ample material on which the definition criteria for such a typology could be founded. A very important role in this – given our conceptual proposition of commercial retirement – must the degree of commercialization of the corrody policies play. Which conceptual apparatus can reconcile the apparent economic interests and strategies with the likewise apparent charitable intentions of the hospitals? Calibrating those contrasting motives in a conceptually coherent manner will be a core issue for future research.

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III. List of Figures and Tables

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