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## Women's Work and Wages in the Sixteenth Century and Sweden's Position in the "Little Divergence"

Jakob Molinder & Christopher Pihl

# Women's work and wages in the sixteenth-century and Sweden's position in the "Little divergence"

*Jakob Molinder*<sup>♦</sup>; *Christopher Pihl*<sup>\*</sup>

## **Abstract**

We use a unique source from the Swedish royal demesnes to examine the work and relative wages of women in sixteenth century Sweden, an economic laggard in the Early Modern period. The source pertains to workers hired on yearly contracts, a type more representative for historical labour markets than day-labour on large construction sites, and allows us to observe directly the food consumed by workers. We speak to the debate on the "Little Divergence" within Europe as women's work and gender differentials in pay is a key indicator of women's relative autonomy and seen as a cause for the economic ascendancy of the North Sea region during the period. We find small gender differentials among both unskilled and skilled workers, indicating that Sweden was a part of the "golden age" for women. We argue that despite superficial equality, women's economic outlooks were restrained in many other ways – including their access to higher skilled work and jobs in the expanding parts of the economy – adding important nuance to the discussion about the relationship between women's social position and economic growth in the Early Modern period.

**JEL-codes:** N00, N33, J21, J31

**Keywords:** women's work, wages, little divergence, Sweden, gender gap, Early Modern period:

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## 1. Introduction

Several explanations have been put forward for the “Little Divergence”: the process by which the North Sea area advanced ahead of the rest of Europe during the centuries following the Black Death. A prominent theory links the process to the greater autonomy of women in North-Western Europe; the region was characterized by marriages later in life, small spousal age gaps as well as a high share of women that remained single, resulting in a unique European Marriage Pattern (EMP).

According to this “Girl power” hypothesis, this pattern of family formation and demographic behaviour had important consequences for economic growth. The EMP resulted in improved property rights for women, encouraged female participation in the labour force, and created greater equality between husband and wife.<sup>1</sup> Women’s autonomy, in turn, led to restraints on fertility and increased investments in children’s human capital, allowing economies to escape the Malthusian trap and to begin the process of modern economic growth.<sup>2</sup>

Women’s role on the labour market plays a crucial role in this framework. De Moor and Van Zanden (2010) write that “In the North Sea region, women’s earnings were relatively high (when compared to men’s), and access to the labour market was relatively easy (p. 27).”<sup>3</sup> The North Sea region in this case encompasses a core area of the Western Netherlands, Flanders, and Eastern England, but also includes Sweden as well as Northern France and Germany, following Hajnal’s line from Trieste to Saint Petersburg.<sup>4</sup> In the book *Capital Women*, Van Zanden et al argue that North-Western Europe experienced a “golden age” for female workers after the Black Death, which explains why the EMP emerged in that place and time.<sup>5</sup> In the Netherlands, England, as well as Sweden, women’s casual wages came closer to those of men.<sup>6</sup> In contrast, in southern Europe, the authors argue, female day wages often

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<sup>1</sup> De Moor and Van Zanden ‘Girl power’, pp. 1–33. For similar arguments, see: Foreman-Peck, ‘The Western European marriage pattern’, pp. 292–309; Voigtländer and Voth, ‘Why England?’; Voigtländer and Voth ‘How the west “Invented” fertility restriction’, pp. 2227–2264; Diebolt and Perrin, ‘From stagnation to sustained growth’, pp. 545–549.

<sup>2</sup> De Moor and van Zanden, ‘Girl power’; Carmichael, De Pleijt, Van Zanden, and De Moor, ‘The European marriage pattern’; Van Zanden, De Moor and Carmichael, *Capital women*.

<sup>3</sup> De Moor and van Zanden, ‘Girl power’; A. De Pleijt and J.L Van Zanden ‘Two worlds of female labour’; Van Zanden, De Moor and Carmichael, *Capital Women*.

<sup>4</sup> Van Zanden, De Moor and Carmichael, *Capital Women*, pp. 21–24 and 132–133.

<sup>5</sup> Van Zanden, De Moor and Carmichael, *Capital Women*, pp. 133–134.

<sup>6</sup> Van Zanden, De Moor and Carmichael, *Capital Women*, pp. 133–134; Gary, *Work, wages and income*. Gary shows that women’s casual wages in Sweden approached those of men in the late sixteenth and early seventeenth century.

were set by custom at about 50 percent of men, and there was no “golden age” for women which explains the lack of an EMP and economic growth in this region.<sup>7</sup>

However, Dennison and Ogilvie (2014) have criticised the notion that the EMP can explain the Little Divergence. In a meta-analysis of local demographic studies, they argue that the EMP was often most pronounced in places that experienced little economic growth.<sup>8</sup> Recently, Judith M. Bennett has likewise argued that the EMP in England neither evolved after the Black Death nor emerged out of prosperity. According to Bennett, the EMP appeared in England already in the period between 1086 and 1250, and out of poverty: people had too little means to neo-locate and to marry.<sup>9</sup> In their analysis, Dennison and Ogilvie (2014) also highlight the importance of labour markets. In, for example, the German lands, characterized by strong forms of the EMP, women’s wages often fell far short of men’s because of discrimination and restrictions imposed by guilds and local communities. They contend that women’s autonomy under any demographic system depended on the balance of power among other institutions, concluding that: “What mattered for female autonomy and any resulting economic benefits was not solely marriage or household patterns, but what kinds of work women were allowed to do and what wages they were allowed to earn.”<sup>10</sup>

Looking closer, the Swedish case constitutes a conundrum for the “Girl power” hypothesis and a good case for nuancing Denison’s and Ogilvie’s critique. The collection of demographic studies used by Dennison and Ogilvie shows that Sweden was characterized by an extreme form of the EMP, which in the eyes of the “Girl power” hypothesis should have resulted in stronger female autonomy and subsequent economic growth. Despite this, Sweden remained a laggard in the Little Divergence. As revealed in Figure 1, the country experienced sluggish growth in GDP per capita and decreasing real wages throughout the seventeenth and eighteenth century; Sweden followed a similar trajectory as Italy, falling behind England and Holland. Denison and Ogilvie, on the other hand, present “daunting institutional constraints” – serfdom, guilds<sup>11</sup>, communities, religious bodies and absolutist states – as the prime suspects to slow economic growth outside England and the Netherlands.<sup>12</sup>

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<sup>7</sup> See also De Pleijt and Van Zanden, ‘Two worlds of female labour’.

<sup>8</sup> Dennison and Ogilvie, ‘Does the European marriage pattern explain economic growth?’.

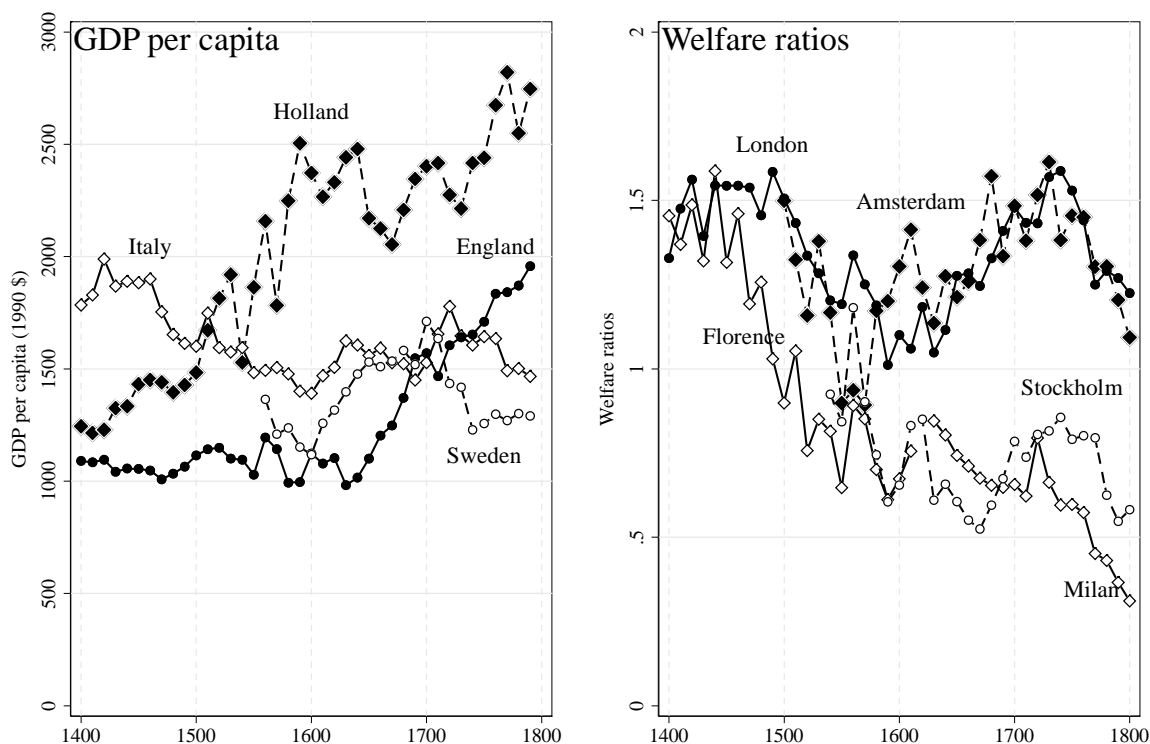
<sup>9</sup> Bennett, ‘Wretched girls’, pp. 315–320 and 335–338.

<sup>10</sup> Dennison and Ogilvie, ‘Does the European marriage pattern explain economic growth?’, p 675. They also add, “These in turn were strongly influenced by nonfamilial institutions—communes, guilds, manorial systems, the church, the state—which regulated women’s economic options.”

<sup>11</sup> For a critique of Ogilvie’s interpretation of the relation between guilds and women’s position in the labour market, see Crowston, ‘Women, gender, and guilds’, pp. 24–27.

<sup>12</sup> Dennison and Ogilvie, ‘Does the European marriage pattern explain economic growth?’, pp. 686–687.

**Figure 1: GDP per capita and Welfare Ratios in England, Holland, Italy and Sweden, Decadal Averages, 1400 to 1800**



*Note:* The welfare ratio expresses the number of respectability baskets of consumption that a male worker could afford for a family with a wife and two children. Wages for Florence only available until the 1620s and for Milan from the 1630s.

*Source:* GDP per capita: Data taken from Fouquet and Broadberry (2015). Original series from Broadberry et al (2015) for England, van Zanden and van Leeuwen (2012) for Holland, Malanima (2011) for Italy and Schön and Krantz (2012) for Sweden. Welfare ratios: Allen (2001) except the Stockholm series which is taken from Gary (2018).

Nonfamilial institutions should thus have hampered development of well-functioning factor markets and lowered women’s wages.<sup>13</sup> Nevertheless, recent studies of casual wages have shown that Sweden was a part of the “golden age” for women, with high female casual wages in the centuries after the Black Death.<sup>14</sup> Furthermore, Sweden lacked some of the repressive institutions listed by Dennison and Ogilvie. Serfdom was never implemented and guilds were weak, especially before the seventeenth century and outside the few and miniscule towns.<sup>15</sup> For the Swedish case, Jonas Lindström et al, also downplay the role of the type of male dominated social networks that the guilds and village communities represent, as a factor in constraining people’s sustenance activities. Instead, they put emphasis on marital and labour

<sup>13</sup> Dennison and Ogilvie, ‘Does the European marriage pattern explain economic growth?’, p. 687.

<sup>14</sup> K. Gary, *Work, wages and income*.

<sup>15</sup> Lindström, ‘Genusarbetsdelning i det tidigmoderna skräväsendet’, p. 180; Lindström, Hassan Jansson, Fiebranz and Jacobsson, ‘Mistress or maid’, pp. 228-229, 237, 247-248.

laws forcing young unmarried individuals to take up service. Their conclusion that marriage “was a way of escaping the forms of compulsion and exclusion that effected young people”<sup>16</sup>, is also quite far from the rosy picture of the conditions for unmarried women given by the “Girl power” hypothesis.

In this article, we take a detailed look at female relative wages and women’s work and autonomy in Sweden in the sixteenth century. We use an unusually rich source from the royal demesnes—covering a variety of economic sectors and from estates of various sizes—that provides us with information about the employees, their remuneration, their periods of employment and the food they consumed. We are well situated to examine women’s position since we are able to compare wages for workers hired by the same employer and our source provides evidence on both men and women across the skill distribution. We are also able to account for the food that the employees were allotted at a time when payment in kind constituted a significant fraction of annual workers’ wages.<sup>17</sup> We add new evidence by comparing gender differences not simply within the unskilled group but also among skilled workers. Our evidence also relates to workers hired on yearly contracts, while most previous work on female relative wages have focused on day-wages. Workers hired on annual contracts are often excluded, since their pay frequently involved a large component of in-kind payments such as room, board and other auxiliary payments. Such data are also harder to find, which is unfortunate since most workers in pre-modern Europe were employed on annual contracts rather than by the day.<sup>18</sup> For daily work it is also more difficult to ascertain what other alternative sources of income those workers had, while for workers on annual contracts remuneration corresponded more closely to yearly income.<sup>19</sup> The source also allows us to pay attention to the context within which women’s work took place, providing crucial evidence on relative pay.

We find high relative female pay in unskilled jobs in Sweden, which seem to confirm that a “golden age of women” also was present in Sweden also when workers hired on yearly contracts are considered. We also find high relative wages for women on the smaller estates in more skilled occupations, suggesting that this pattern extended to women with higher paying jobs in the wider economy. On larger estates, however, skilled women appear to have been earning less than their male counterparts and their employment opportunities were fewer.

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<sup>16</sup> Lindström, Hassan Jansson, Fiebranz and Jacobsson, ‘Mistress or maid’, p. 248

<sup>17</sup> Drelichman and Agudo, ‘The gender wage gap in early modern Toledo’, pp. 351–385.

<sup>18</sup> J. Humphries and J. Weisdorf, ‘The wages of women in England, 1260–1850’, *Journal of Economic History*, 75:2 (2015), p. 405–447; Hatcher and Stephenson (ed.), *Seven centuries of unreal wages*.

<sup>19</sup> De Pleijt and Van Zanden, ‘Two worlds of female labour’.

However, within a particular skill group, men and women could hold different occupations and tasks, however, which could affect their relative pay, and productivity could differ between sexes as well. This is especially the case on larger estates where occupational differentiation and the division of labour went far. For this reason, we also zoom in on the skilled occupation of brewers. The brewers and brewsters of the Crown had to follow recipes prescribed centrally, and the production process was highly standardised. Thus, the same sorts of brews were produced at the different estates. Examining cases where male and female brewers worked side by side on the same estate, no evidence of women systematically being paid less can be found.

Our evidence on relative pay runs contrary to the assertion of Dennison and Ogilvie that women's remuneration was regulated in Scandinavia as a result of institutional restrictions. Demand, but also more subtle forces than guilds and village communities, seem to have shaped the labour markets for men and women. Swedish women had access to the labour market; in some cases, the access was easy, in other, it was not, making contexts and variations important when analysing early modern labour.

For the girl-power hypothesis, a central premise is that women independently could make a living on their own labour. A chief argument in *Capital Women* is that within EMP, women had incentives to continue to contribute to the household economically after marriage, since they knew that they would get a share of the assets accumulated during the marriage at a property settlement. Outside the EMP-region, property tended to be separated between the spouses, which potentially hampered women's will to contribute. According to van Zanden et.al., there was an additional possibility for women within the EMP to stay unmarried and to live on their own incomes.<sup>20</sup> If women should have incentives to contribute to the marital economy as well as having the option to make a living as unmarried, a labour market for women of all ages and marital statuses must be present, and women must have the opportunity to acquire skills and to make careers.<sup>21</sup> Our evidence for Sweden raises doubts about the link between the EMP and female autonomy. While women earned similar amounts as men, their access to skilled high-paying jobs was heavily circumscribed. Within a particular job, even though pay was similar, it gave different opportunities to women and men. While male workers in skilled and superior positions could marry, set up households and form families of their own, this opportunity was seldom given to female employees. Women

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<sup>20</sup> Van Zanden, De Moor and Carmichael, *Capital Women*, pp. 32-36.

<sup>21</sup> Lindström, Hassan Jansson, Fiebranz and Jacobsson, 'Mistress or maid', pp. 29-34; Gary, *Work, wages and income*, p. 24.



were also generally excluded from jobs in the expanding parts of the economy such as in administration and management as well as the budding metal industry.

Altogether, our results illustrate the peril of using relative wages to make inference about women's autonomy. Sweden shared many features with other regions such as Denmark-Norway and the German lands and a study of Sweden contributes to a broadening of research on early modern labour markets that hitherto has had a strong focus on the, in many aspects, atypical cases of England and the Netherlands.<sup>22</sup> In this sense, our work mirrors the recent contribution by Drelichman and González Agudo (2020) showing that wages in early modern Castile were not set according to custom, but responded to economic conditions in the same way as in North-Western Europe. They conclude, similar to us, that despite similar wages, women faced more restricted occupational possibilities than men. A similar situation seems to have been present also in Portugal.<sup>23</sup> Competitive markets for women's labour thus seem to have been a pan-European phenomenon, but so does women's subordination and lack of access to jobs that could provide a springboard for economic independence. From the perspective of EMP and women's labour markets, it appears that the contrast between South and North Western Europe is much less clear than have been argued by the proponents of the "Girl power" hypothesis.

The rest of the article is organized as follows. In the subsequent section we present the historical background and our data from the Swedish royal demesnes. In section three we then go on to use the information on employment patterns to discuss women's position in the work organization on the estates. In section four, we present our estimates of female relative wages for unskilled and skilled workers and analyse the case of brewers and brewsters. In the fifth section, we discuss the "Girl power" hypothesis and the EMP in light of our findings before conclusions are offered in section six.

## 2. Historical background and our data from the Swedish royal demesnes

### *2.1 The source*

The records from the royal demesnes are a very rich, but little used, source from sixteenth-century Sweden. In this period, a great share of the crown land was held directly by the crown itself and was not leased to tenants at rent. From the 1540s, a fine-meshed web of smaller

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<sup>22</sup> Gary, *Work, wages and income*, p. 16.

<sup>23</sup> Palma, Reis and Rodrigues, 'Historical gender discrimination'.

estates, with 20 to 40 persons annually hired, and some bigger, with 50 to 100 hundred people in the staff were organized all over the central parts of Sweden and Finland (which was then an integrated part of the Swedish realm). At most, nearly 100 estates were held directly by the crown.<sup>24</sup>

The interest of the Crown to run the estates itself was a part of a transformation from a medieval primitive domain state towards an entrepreneurial domain state in which several central and northern European states took part.<sup>25</sup> Driving force of this process was the increasing costs caused by the higher level of aggression between the European states. Higher war expenditures forced princes all round Europe to find new ways to increase their incomes. European princes who did have substantial incomes from domains began to develop organizations and strategies to increase them and handle them in a more efficient way. A majority of the estates in Sweden were agricultural production units while others were placed in the mining district to control the expanding Swedish production and export of metals, mainly copper, silver and iron.<sup>26</sup> The estates were an instrument for the Crown to intensify its control over taxpayers and build a web for redistribution of taxes, which largely were in kind, as well as strengthen its military presence in the local community. As pointed out by Charles Tilly, Sweden was the first European state that implemented direct rule without the intermediation of local elites.<sup>27</sup>

The expansion of the crown demesnes, with an increased demand for unskilled labour in the fields, in cow stables and in mines and forges, as well as skilled labour in management and in the crafts, affected the whole labour market. A recurrent topic in the correspondence within the Crown organisation was how to satisfy the organisation's labour demand.<sup>28</sup> The expansion also made the state a major employer competing for labour. Approximately 6,000 people, men and women were engaged at the estates and in the central and local administration of the state in the 1570s and 1580s.<sup>29</sup>

In their critical review of historical wage and income data, *Seven Centuries of Unreal Wages*, Hatcher and Stephenson points to the fact that 'paymasters, comptrollers, auditors, bailiffs and treasurers [...] were not adhering to any general accounting standards'. Further, they highlight the lack of regulating bodies controlling and collecting statistics.<sup>30</sup> To avoid

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<sup>24</sup> Odén, *Rikets uppgift och utgift*; Myrdal, 'Gårdsräkenskaper från 1400- och 1500-talet'.

<sup>25</sup> Pihl, 'Gender, labour, and state formation', pp. 685–710.

<sup>26</sup> Hallenberg, *Kungen, fogdarna och riket*, pp. 246–251.

<sup>27</sup> Tilly, *Coercion, capital*, p. 25.

<sup>28</sup> Hallenberg, *Kungen, fogdarna och riket*, chapter 3; Pihl, *Arbete*, p. 148.

<sup>29</sup> Odén, *Rikets uppbörd*, pp. 194, 340, 332 ff; Larsson, 'Gustav Vasa', p. 25.

<sup>30</sup> Hatcher and Stephenson (ed.), *Seven centuries of unreal wages*.

waste or fraud, bailiffs and scribes at the estates of the Swedish Crown had to keep highly detailed accounts following a standardized accounting practice. At the end of the fiscal year, at Michaelmas, the accounts were sent to Stockholm for auditing by the clerks of the central administration, which further strengthened the uniformity of the book keeping practices. These standardized procedures for accounting and auditing created a homogeneous body of accounts from about one hundred estates for a period of more than sixty years, which enables comparisons between estates and between years, making it one of the best sources for studying labour and wages in sixteenth-century Europe. However, not only accounting was standardized, so was also production. At all estates the same types of beer, cheese, and sausage were produced to make sure that every barrel of malt or pig carcass would give the same amount of beer or sausages.<sup>31</sup>

A second point in the critique of previous research on real wages and living standards is that the sources tend to come from rich and big institutions with a high demand for labour and remunerating practices different from the praxis of the majority of employers – small institutions, farmers and craftsmen – in early modern Europe.<sup>32</sup> This critique is, to some extent, also relevant for the state-produced sources used in this study. The estates in this study were bigger and had more employees than an average Swedish peasant household or artisan workshop. The small households of the peasantry (freeholders and tenants) were the dominant unit of production in the sixteenth-century. An early seventeenth-century Swedish rural household had in average only one servant hired.<sup>33</sup> From the period before the eighteenth century, unfortunately, no accounts are preserved from Swedish peasant households.<sup>34</sup> However, alongside the households of the peasantry and the burghers we find a variety of other organisations such as the manorial households of the nobility and the high clergy, mines, shipyards etc., counting their employees by the dozens.<sup>35</sup> The numbers of production units – private or royal manorial households – substantially bigger than an ordinary peasant household have been estimated to 500 in 1560.<sup>36</sup> Previous studies have also shown how

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<sup>31</sup> Myrdal, 'Gårdsräkenskaper', pp. 181–189, 192–194; Myrdal and Söderberg, *Kontinuitetens dynamik*, p. 263.

<sup>32</sup> Hatcher and Stephenson (ed.), *Seven centuries of unreal wages*.

<sup>33</sup> Andersson, *Migration i 1600-talets Sverige*, pp. 114–115.

<sup>34</sup> Myrdal, 'Gårdsräkenskaper', p. 177.

<sup>35</sup> Munktel, *Gods, godsägare och landbor*, pp. 125–135; Ferm, *De högadliga godsen*, pp. 261–262.

<sup>36</sup> Ferm, *De högadliga godsen*, pp. 24–25.

servants were circulating between peasant employers and the Crown.<sup>37</sup> Börje Harnesk has argued that the new estates competed against the peasantry for servants.<sup>38</sup>

A third strand in the critique of previous studies of real wages have been of the focus on day wages. A majority of the early modern workforce was not paid by day; yearly contracts were in many parts of Europe the dominant form of hiring labour.<sup>39</sup> In Sweden, national and statutory law prescribed annual or half-years contracts as the regular form of employment.<sup>40</sup> From the Middle Ages to the nineteenth century, the legislators in Sweden were by laws and other regulations striving to minimize day labour and instead make half- or full year employments standard in an attempt to secure the supply of labour but also to control the unlanded classes.<sup>41</sup> The annually hired staff performed the most of the work done at the crown estates. People paid by day or by piece, often belonging to the labouring poor, were hired at either harvest or other peaks in the demand of labour, for example large-scale building projects. Other occasions when people were remunerated by piece or day were when the annually hired staff lacked necessary skills – for example to weave tapestries or to build watermills.<sup>42</sup> At Julita 1581, 835 day wages were paid, of these were 266 paid to 2 men for threshing, 191 to craftsmen (shoemakers, tailors, and coopers), 39 to a handful men for work in the lime kiln, other men paid by day were chopping wood or doing undefined agricultural or construction work. Of the 835 days, only 81 were paid to women. A weaveress was paid for two days work and the other 79 days were work by 55 women breaking flax.<sup>43</sup>

Since day wages predominantly were in cash, while year wages often consisted of a combination of cash and in-kind, the former have been preferred in previous studies. But research, on both Sweden and other parts of Europe, has stressed that board was an important, and in many cases even the most important, part of the remuneration. For England, Craig Muldrew and Jane Whittle have shown that board made up of between 55 and 80 of the total wage costs.<sup>44</sup> Information on what was consumed by whom is often difficult to find in early modern sources and previous research is full of estimates and guesses.

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<sup>37</sup> Harnesk, 'Statlig experiment i norr', pp. 9–12; Hedberg, *Företagarfursten*, pp. 294–298; Andersson, *Migration i 1600-talets Sverige*, pp. 125–128.

<sup>38</sup> Harnesk, 'Statlig experiment i norr', pp. 194–195.

<sup>39</sup> Hatcher and Stephenson (ed.), *Seven Centuries of Unreal Wages*.

<sup>40</sup> Lindström, Hassan Jansson, Fiebranz and Jacobsson, 'Mistress or maid', pp. 229–230.

<sup>41</sup> Boëthius, *Gruvornas, hyttornas och hamrarnas folk*, pp. 144–149; Harnesk, *Legofolk*, p. 32; Lindström, Hassan Jansson, Fiebranz and Jacobsson, 'Mistress or maid', pp. 229–230.

<sup>42</sup> Pihl, *Arbete*, pp. 153–170.

<sup>43</sup> Riksarkivet (RA) Landskapshandlingar, Julita 1581:14.

<sup>44</sup> Whittle, 'Servants in rural England', p. 96; Muldrew, *Food, energy and the creation of industriousness*, pp. 29, 210–211, 227.

There have been some accommodations for local consumption patterns in previous research, but the fact remains that the budgets used are kept fixed over long time-spans and most items of the food budget is taken to be the same across countries.<sup>45</sup> To gain control of the food expenditures at the Crown's estates, the bailiffs kept detailed lists of food consumed on a day-to-day basis: to whom it was served and in what qualities and quantities. At the end of the year, the yearly average consumption was calculated at an individual level.<sup>46</sup> This practice provides us with uniform information from different regions in Sweden on the actual food consumption at an individual level.<sup>47</sup>

The staff was served at two different tables – the managerial and the skilled staff ate at *svennebordet* while the subordinated and less skilled were served at *spisebordet*. The food served at the two tables varied both in quantity and quality. For example, the beer served at *svennebordet* contained more barely and hops than the beer served at *spisebordet*. These two tables are to some extent comparable to the standardised consumption baskets used in calculations of early modern real wages. The people served at the *spisebord* were in subordinated positions, performing low-skilled work.<sup>48</sup> Both men and women were served at the two tables and neither in instructions to the bailiffs on how the boards should be organized nor in records from the estates can any differences in volumes or qualities according to gender be found. In contrast to the sources used in many other studies on wages and living conditions in early modern Europe, the accounts from the estates provide us with information on the actual consumption, they were not simply budgets or estimates. Finally, and most importantly, it is explicitly stated in the sources and established by previous research that the food was consumed by one person, e.g., not a man *and* his family.<sup>49</sup>

Sixteenth-century Sweden was a society with a shortage of coins. Although the wages to the annually hired staff were set centrally by the administration in Stockholm – mainly in cash and imported cloth – they were very seldom paid in these commodities at the estates. Due to both the shortage of coins and often also a shortage in imported cloth, the actual wages were very often transformed from money and cloth to commodities available at

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<sup>45</sup> On the composition of consumption baskets and its impact on the timings and magnitude of the Little Divergence in Europe see Losa and Zarauz 'Spanish subsistence wages and the Little Divergence in Europe, 1500–1800', pp. 59–84; Gary, *Work, wages and income*.

<sup>46</sup> Odén, *Rikets uppbörd*, p. 180.

<sup>47</sup> Söderberg, 'Hade Heckscher rätt?', pp. 341-356.

<sup>48</sup> Allen, 'The great divergence'.

<sup>49</sup> Odén, *Rikets uppbörd*, p. 180; Söderberg, 'Hade Heckscher rätt?'.

the estates or in the local markets: grain, livestock, hides and domestically produced fabrics. The source always denotes the goods that were actually paid out to the employees.<sup>50</sup> Finally, many studies of wages are based on the building sector. But, if our interest is to understand the remuneration of both men's and women's wages, and how these differed in time and between sectors, one has to look at other branches than just the building sector. Most economies besides England and Holland were distinctly agrarian, and from that sector most of the population earned their income. In addition, in many parts of Europe, women were not very well represented within the building sector.<sup>51</sup> To this date, wages from the building sector in Stockholm have also been the dominating source for Swedish wages.<sup>52</sup> This is problematic for an economy with a great majority living in non-urban contexts, less than five percent of the Swedish population lived in towns in the 1500s.<sup>53</sup>

Over the past decade, research has shown that quite early on a substantial part of the population in Northwestern Europe was dependent on wage labour. Van Zanden et al. point at the fact that in Holland and England, the share of the population active on the labour market was substantial already in the sixteenth century, in some calculations above 60 percent.<sup>54</sup> Although not close to the high proportions of Holland and England, Martin Andersson can show that at least 15 percent of the population in the Swedish province of Södermanland was employed as living-in servants in the early sixteenth century, and like in many other early modern European societies, the female servants were in majority, with a female to male ratio of 1.33.<sup>55</sup> A central component in the EMP was the system of life-cycle servants, which in many European countries was backed up by labour laws forcing people to get in to service.<sup>56</sup> In Sweden, anyone not owning land, or other resources of a certain amount, was forced by law to take up employment.<sup>57</sup> Jonas Lindström, who has studied the province of Västmanland, neighbouring Södermanland, has shown that in the early seventeenth century, at least 25 percent of the rural households were unlanded and dependent on wage labour, so-called labouring poor.<sup>58</sup> These households had often access to some land, which enabled them to

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<sup>50</sup> Odén, *Riksets uppörd*, p. 171, 181, 188; Hedberg, *Företagarfursten*, p. 306.

<sup>51</sup> Drelichman and Agudo, 'The gender wage gap in early modern Toledo', pp. 5–7.

<sup>52</sup> Söderberg, 'Long-term trends in real wages of labourers', pp. 52–55.

<sup>53</sup> Lilja 'Swedish urbanization c. 1570–1800: chronology, structure and causes, pp. 277–308.

<sup>54</sup> Lambrecht, 'The Institution of Service in Rural Flanders', pp. 39–40. van Bavel, 'Rural wage labour'; Van Zanden, De Moor and Carmichael, *Capital Women*, p. 35.

<sup>55</sup> Andersson, *Migration i 1600-talets Sverige*, p. 115; Allen, 'The great divergence', p. 215; Lambrecht, 'The Institution of Service', pp. 40–43.

<sup>56</sup> Lis and Soly, *Worthy efforts*; Lindström, Hassan Jansson, Fiebranz and Jacobsson, 'Mistress or maid'.

<sup>57</sup> *Magnus Erikssons landslag*, Byggningsbalken XIV, paragraf 3.

<sup>58</sup> Lindström, 'Labouring poor'; Friberg and Friberg, p. 9.

combine agricultural production with casual wage work, while the living-in servants were annually hired. The labouring poor was a labour force existing partly alongside, but to some aspects integrated, with the live-in servants. Children with parents belong to the labouring poor tended to be overrepresented among servants.<sup>59</sup> Together, the two groups made up about half of the population in the provinces studied by Lindström and Andersson.<sup>60</sup>

### I.1. Data selection

The estates of the crown were scattered all over the central part of the realm. The agriculture production at the estates was a combination of arable and pastoral farming, but with some regional difference. For example, at the island of Öland, with big heaths, the estates were specialized in sheep farming and at the plains of Västergötland and Östergötland arable farming dominated.<sup>61</sup> At the estates, especially at the bigger ones, a great variety of trades was performed, from masonry and blacksmithing to brewing and baking.

From many estates, rich series of accounts from the latter half of the sixteenth century are preserved. The accounts can provide us with information about the employees, their remuneration, their periods of employment and the food they ate, which all gives a unique opportunity to study labour and living standards in sixteenth-century Sweden. The estates chosen for this study all have relatively well-preserved sequences of accounts for both wages and food allotments. In this article we use data from the estates of Julita, Höjentorp, Born, and Gripsholm (see Figure 2 below). The estates are selected according to three premises. Firstly, they are chosen to represent different regions of the realm. Secondly, they represent different kinds of production or functions within the organisation of the state. Thirdly, since previous research have shown that organizational size affects the gender distribution, estates of different sizes are chosen. In smaller households or other types of organisations, the gender balance tends to be more even than in large ones.<sup>62</sup>

Gripsholm and Julita in the province of Södermanland, had good communications with Stockholm and the Baltic Sea. At Julita, agricultural production – a combination of arable and pastoral farming – dominated. Gripsholm was a military stronghold and an administrative centre but also a big landed estate with substantial agricultural production.

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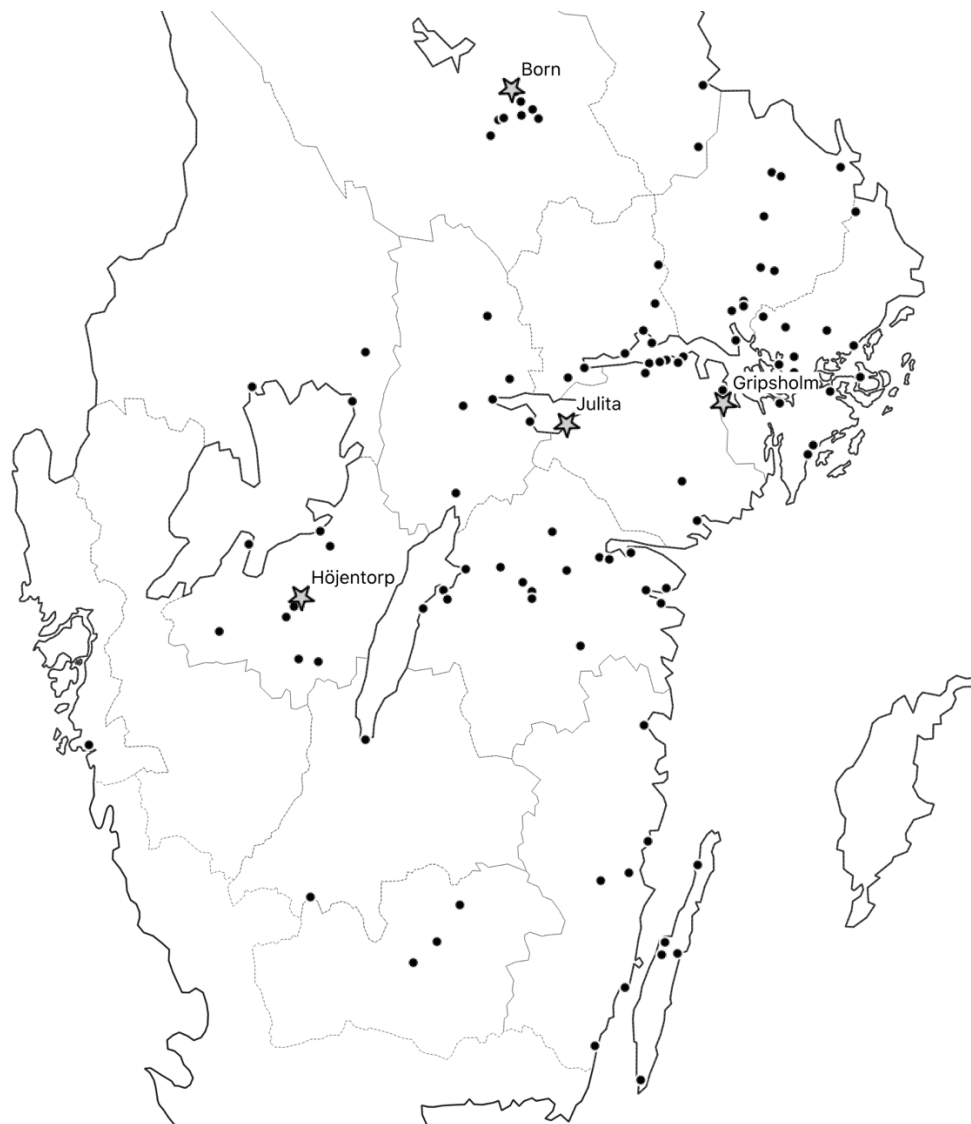
<sup>59</sup> Lundh, 'Servant migration in Sweden', pp. 66–68; J. Lindström, 'Labouring poor', pp. 157–158.

<sup>60</sup> Lindström and Mispelaere, 'Interdependent living'; M. Andersson, *Migration i 1600-talets Sverige*, p. 113.

<sup>61</sup> Myrdal and Söderberg, *Kontinuitetens dynamik*, pp. 264–270.

<sup>62</sup> Pihl, 'Gender, labour, and state formation', pp. 702–705.

**Figure 2: Map of the royal demesnes and the estates used in the study**



*Note:* Each dot in the map represents a royal estate operating during any period between 1540 and 1600. Stars mark the location of the four estates used in the study. Light grey lines represent the borders of the historical Swedish counties created in 1634. *Source:* Myrdal and Söderberg 1991, p. 260-262

Höjentorp, in the province of Västergötland, was located between a grain-producing area and a region dominated by pastoral farming. Born was the Crown's estate at the copper mine of Falun in the province of Dalarna and among its staff we find both metal workers and farm servants. Julita and Höjentorp represent the smaller estates of the Crown demesne, with 24 to 30 persons annually hired, while Gripsholm and Born represent the big ones, with 100 to 120 annually hired. The accounts we use in the study are further described in Table 1.



**Table 1: Number of individual wage observations per estate and year with an indicator if information on allotments for different classes of labour is available**

Year	Julita	Höjentorp		Born		Gripsholm	
	Obs	Obs	Allotment	Obs	Allotment	Obs	Allotment
1564		33					
1573		<b>28</b>	<b>Yes</b>				Yes
1574	35		Yes				Yes
1575	23						Yes
1576		25					
1577		32		<b>87</b>	<b>Yes</b>		
1578	8	28				<b>102</b>	<b>Yes</b>
1580	44	29					
1581	15					<b>67</b>	<b>Yes</b>
1582	32	31				<b>54</b>	<b>Yes</b>
1583	32	23					Yes
1584		27				<b>50</b>	<b>Yes</b>
1585	31	25				<b>90</b>	<b>Yes</b>
1586	32	24					
1587	31			<b>153</b>	<b>Yes</b>	<b>89</b>	<b>Yes</b>
1588		35				88	
1589	38	26				73	
1590		26		<b>157</b>	<b>Yes</b>	73	
1591	35					81	
1592						85	
1593	40					103	
1594	34					88	
1595						93	
1596	31					88	
1599	23					84	
1600		23				86	
1601	30	25				77	
1602		14					
1610	21						

Sources: Sörmlands handlingar 1573:4, 1574:4, 1574:14, 1575:8, 1575:9, 1578:3, 1578:11, 1580:12, 1581:3, 1581:14, 1582:1, 1582:6, 1583:1, 1583:10, 1584:7, 1585:13, 1585:18, 1586:9, 1587:9, 1587:14, 1588:3, 1589:10, 1589:14, 1590:12, 1591:12, 1591:20, 1592:6, 1593:7, 1593:20, 1594:1, 1594:3, 1595:4, 1596:5, 1596:14, 1599:6, 1599:19, 1600:5, 1601:2, 1601:4, 1610:11; Västergötlands handlingar 1564:14B, 1573:12B, 1576:13B, 1578:15, 1580:15, 1582:14, 1583:12B; 1584:14B, 1585:3B, 1586:17B, 1588:2B, 1589:17B, 1590:13B, 1600:8B, 1601:7B, 1602:11B, 1610:3; Dalarnas handlingar 1572:15 A and B, 1587:3A and B, 1590:10A and B at the Swedish National Archives (Riksarkivet, RA) in Stockholm.

The wage observations are centred on the 1580s, but observations for Julita, Höjentorp and Gripsholm stretches from the 1560s to the early seventeenth century. Most wages are observed at the Gripsholm estate, which was the largest of the four and consequently hired the

most labour. Born was also large, but for this estate we only have wage information for three years.

The allotment column indicates where we have access to information on the food served to different classes of labour on the estate. The text is bold where we have access to both wage payments and differentiated food allotments. For Julita we do not have any information on allotments divided between the different types of labourers.

The allotments recorded in the source have some weaknesses. Information is given on the consumption of unprocessed raw products – barley and rye, not bread and beer – which makes it more difficult to compare the consumption at the Swedish estates with the baskets in other studies. Furthermore, as pointed out by Jane Humphries, a cost was connected to the processing of the commodities. In the case of the Crown estates, the cost was the wages to for example brewers, brewsters and bakeresses. There are also indications that some commodities consumed at the estates was not registered at all, or only sporadically. As shown in Table 2 below, giving examples of allotments at Gripsholm from 1578 and 1587, candles as well as brawn and sausages were only registered occasionally and from other sections of the accounts, we also know that root vegetables, such as carrots and turnips, were consumed.

**Table 2: Example of Allotments at Gripsholm in 1578 and 1587**

<i>Good</i>	<i>Unit</i>	<b>1578</b>	<b>1578</b>	<b>1587</b>	<b>1587</b>
		<i>Svenne</i> Skilled	<i>Spise</i> Unskilled	<i>Svenne</i> Skilled	<i>Spise</i> Unskilled
Grains	barrels	8	4.6	5.5	5
Hops	lispunds	0.875	0.055	0.55	0.05
Butter and cheese	barrels	1.3	0.03	0.5	0.3
Meat and pork	lispunds	9.5	4.7	6.1	5.5
Salted fish	lispunds	14.25	14.5	14	13.25
Dried fish	lispunds	1.6	1.2	1.9	1.25
Fresh fish	lispunds	2.5	2	1.5	3
Salt	lispunds	1.1	1	1.1	0.9
Candles	lispunds	11.5	0.5		
Brawn and sausages	lispunds	1.65	1.3		

*Sources:* Södermanlands handlingar 1578:11, 1587:14 at the Swedish National Archives (Riksarkivet, RA) in Stockholm.

The bailiffs seem to mainly have been accounting for commodities that had a market value. In this study, with a main interest in the economic value of the board – for the Crown and for the

wage earner – this is less of a problem, but important to bear in mind when comparing with allotments in other sources.

As can be seen in Table 2, workers eating at *svennebordet* for skilled workers generally received more meat and pork as well as grain and hops than those at *spisbordet* for unskilled workers.

### 3. Gender and the work organisation on the estates

To give a picture of the role of gender and skill on the estates, the sample have been in HISCLASS according to occupation and status. The HICLASS scheme, introduced by van Leeuwen and Maas (2011), is based on the Historical International Standard of Classification of Occupations (HISCO), where historical occupations are coded into six-digit codes indicating one of 1,600 possible unit groups (van Leeuwen et al., 2002).<sup>63</sup> We have used occupational titles as well as contextual information from the estates' accounts, instructions from the central administration, and sixteenth-century household manuals<sup>64</sup> to make the categorisations. Following on the HISCLASS categorisation, the staff have been sorted into four groups corresponding to the different HISCLASS levels: "7. Medium skilled", "9 & 10. Low-skilled", "11. Unskilled in industrial and service activities", "12. Unskilled in agriculture". The distribution of observations by sex and skill-level at each estate is given in Table 3. Table A3 of Appendix B also in detail shows all the occupations that are included in each of the four categories. Since the focus of this study is women's wages and access to the labour market, military work and work within the administration of the estate have been

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<sup>63</sup> HISCO also allows the coding of three additional variables: Status, Relation, and Product. The Status variable provides details on ownership, stages in an artisan's career, and whether someone is a principal or subordinate, information which is sometimes indicated in the original occupational strings but does appear in the occupational code itself. HISCLASS uses the HISCO codes together with the Status variable to sort each occupational unit group into one of twelve social classes. The HISCLASS scheme is based on three levels of differentiation: between manual and non-manual work, between levels of skill, and whether the occupation involves a supervisory role or not. Groups one through five are all non-manual. Within this set of non-manual classes, members of the first group, "Higher managers," have a higher level of skill than, for example, those of the fifth group, "Lower clerical and sales personnel." Those in the first group, "Higher managers," have, in turn, a higher status than the second group of "Higher professional", the position of the former also involves a supervisory role. As a corollary, among manual workers, "foremen," since they also have a supervisory role, are given a higher social status than medium, lower and unskilled manual workers. While the HISCLASS scale running from one to twelve is nominal, it can be read as a ranking where "Higher managers" have the highest social status and "Unskilled workers" the lowest. An exception to this rule is "Farmers and fishermen," which constitute their own social class. The scheme also separates low skilled and unskilled workers from the primary sector and the rest of the economy. This means that a move in the ranking from group nine, "Low-skilled workers," to group ten, "Low-skilled farm workers," does not mean a drop in social status, but rather a change of sector.

<sup>64</sup> Arnell, *Biskop Hans Brasks lefnadsteckning*; Brahe, *Oeconomia*.

excluded as only men were employed at these positions, for example as bailiffs, scribes, and officers.

Table 3 demonstrates some substantial differences of gender ratios between the four estates, both at an overall level and between different subgroups. Julita and Höjentorp had the highest share of female employees, about 40 per cent. The staff on Gripsholm and Born had a more pronounced male dominance, with only 29 and 6 per cent, respectively, of women among the staff. By their size and their type of production, Julita and Höjentorp were more representative for the general economy than Gripsholm and Born.

**Table 3: Number of observations by HISCLASS and sex at each estate**

<b>HISCLASS</b>	<i>7. Medium skilled</i>	<i>9. &amp; 10. Low skilled</i>	<i>11. Unskilled non-farm</i>	<i>12. Unskilled farm</i>	<i>Total</i>
<b>Julita</b>					
Men	18	28	7	267	320
Women	98	37	37	48	220
Share women	84 %	57 %	84 %	15 %	41 %
<b>Höjentorp</b>					
Men	16	6	3	207	232
Women	90	60	33	43	374
Share women	85 %	91 %	92 %	17 %	62 %
<b>Gripsholm</b>					
Men	290	191	166	587	1234
Women	130	78	145	173	526
Share women	31 %	29 %	47 %	23 %	30 %
<b>Born</b>					
Men	36	138	100	35	309
Women	26	7	9	2	44
Share women	38 %	3 %	7 %	6 %	12 %

Sources: see table 1.

At all estates, except for Born in the mining district, unskilled agricultural labour was the biggest group of employees. At the smaller estates Julita and Höjentorp about fifty per cent of the employed were engaged in primary sector activities. At all four estates, the group of unskilled workers employed in agriculture was dominated by men at all four estates, but has to be considered together with the group of unskilled workers outside agriculture, number 12, in which the domestic servants are found. This group was smaller, but dominated by women

at Grisholm, Julita and Höjentorp, and when group 11 and 12 are put together, a more balanced sex ratio appears among the whole group of unskilled workers (25 to 30 per cent women).

At least the female servants, for whom marital status was recorded, were always unmarried. There are indications in the sources that many of the male servants were unmarried as well. In instructions from the central administration it is sometimes specified that male servants (*drängar*), and soldiers, should be unmarried.<sup>65</sup> In other cases, employees were given food or other goods for their weddings by the crown. In cases where the marrying person was a servant, he or she most often disappeared from the records after the wedding, possibly forming a household of their own.<sup>66</sup>

The high share of unmarried women and men serving as domestic and farm servants indicates that Sweden was part of the EMP-area with an access to job opportunities for women outside their parental households. Among the unskilled employees in HISCLASS group 11 and 12 the period in service was often short, in average just one year and a half, which further strengthens this hypothesis. For skilled positions, people serving in the crafts and management, the periods of service were longer.<sup>67</sup> This pattern of shorter time in service and a circulation of the subordinated workforce, mainly consisting of unmarried women and men, goes well with the results from studies of seventeenth- and eighteenth-century Sweden that have placed the country within the EMP.<sup>68</sup>

Parallel to the unskilled young servants, a system for recruiting and training people in skilled works existed within the organisation. Predominantly young men, but also some young women, were hired as *drängar* (hands) or *pigor* (maids) and trained by artisans to learn a craft and after a period in training they were titled as fully trained artisans. Regarding training and dissemination of knowledge, this system was comparable to the training system within the guilds.<sup>69</sup>

Category 7 and 9 & 10, medium skilled and low skilled workers, were dominated by women both at Höjentorp and Julita. They served as brewsters, bakeresses and dairy women and on other positions within the households of the estates, performing tasks closely connected to what was prescribed as women's work by the norm of the time. At larger estates,

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<sup>65</sup> *Gustaf den förstes registratur* 23, p. 34; *Gustaf den förstes registratur* 25, p. 236; *Gustaf den förstes registratur* 26, p. 668.

<sup>66</sup> Pihl, 'Gender, labour, and state formation', pp. 702–705.

<sup>67</sup> Pihl, *Arbete*, pp. 183–186.

<sup>68</sup> Harnesk, 'Stalligt experiment i norr'; Uppenberg, *I husbondens bröd och arbete*, p. 27–40; Andersson, *Migration i 1600-talets Sverige*, pp. 113–115.

<sup>69</sup> Pihl, *Arbete*, pp. 191–192

such as Gripsholm, the share of men in these categories was substantially higher, about 70 per cent of the total. These men were both craftsmen performing traditionally male dominated work, such as carpenters, black smiths and masons, but men were also brewing, baking and cooking, works traditionally within a female sphere of work. A comparable trend of masculinisation took place in English agricultural when small peasant farms were transformed into large capital-intensive farms in many places in the eighteenth and nineteenth centuries.<sup>70</sup>

Sixteenth-century Sweden saw an expansion of works within the state administration – the needs of new bailiffs and clerks were ever increasing.<sup>71</sup> Women could only obtain two positions within the managerial and administrative parts of the demesne organization: as *fataburshustru* and *mjökdeja*. The *fataburshustru*, the estate housekeeper, was in charge of the female labour force, especially textile production, and she could sometimes fill in for the bailiff, e.g., authorizing deliveries, when he was not present. Especially at the bigger estates, she shared the management of the female labour force with the *mjökdeja*, the dairywoman, who was in charge for the dairy cattle and the production of butter, an important export product in sixteenth-century Sweden, as well as cheese. The housekeeper and the dairywoman performed tasks within both administration and crafts when they both supervised and kept accounts and took an active part in the production themselves.<sup>72</sup> However, in comparison with male jobs within administration and management the female positions were few.

At Born, with a strongly male-dominated work force, a majority of the employed was low skilled or belonged to the group of non-agricultural unskilled labourers working in the copper mine. Mining and processing the copper ore was a male dominated labour. Although previous studies on gender division of work have found women within the Swedish early-modern metal industry, they were in minority as workers in the copper industry and the large organisations of the Crown.<sup>73</sup> The expanding Swedish metal industry was thereby not increasing women's opportunities to get an income by their own. In comparison with Julita and Höjentorp, Gripsholm shows a more imbalanced sex ratio, with a majority of men in all four groups. However, both the number and share of women among the unskilled agricultural labourers were higher at Gripsholm, which can be explained by the estate's big livestock.

The ratio of females to males at the estates confirms the notion of Sweden as included in the EMP-region. Both men and women served at the estates and the gender

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<sup>70</sup> Van Zanden, De Moor and Carmichael, *Capital Women*, p. 135.

<sup>71</sup> Hallenberg, *Kungen, fogdarna och riket*.

<sup>72</sup> Pihl, 'Gender, labour, and state formation', pp. 695–704.

<sup>73</sup> Henriksson, 'Kvinnor i Bergslagens gruvor'.

distribution was most even in sectors where the estates' production and organisation were most alike the general economy: agricultural production within smaller organisations. However, at the big estates and within administration and management as well as in the metal industry, three expanding sectors in the 1500s, women were in minority and the new jobs created were mainly male dominated.<sup>74</sup>

#### 4. Female relative pay

Having charted the pattern of gender and occupation on the estates, we now turn to the question of women's relative earnings. We proceed in three steps. We first present how we estimate the monetary value of the in-kind payments that the workers received. We then present our estimates of the relative earnings of women in the four different skill groups. This is followed by a more detailed look at skilled group of brewers and brewsters at the Gripsholm estate, where men and women were working side by side in the same occupation.

##### I.2. Estimating the monetary value of in-kind payments and food allotments

To estimate local prices for the goods that constituted the food allotment and in-kind payments, we make use of a large set of primary and secondary sources. We have collected all price notations we have been able to find for the period and coded each observation according to the type of goods, year and county that they represent. Primary sources include information on purchases and sales made on the estates or by people employed by the Crown in local markets. Secondary sources include prize series collected by Jansson, Andersson-Palm and Söderberg (1991), Edvinsson and Söderberg (2010), and Hedberg (1995). Table A1 in Appendix A details the information retrieved from each source.

In a second stage, we use this dataset on price notations to estimate a price regression, which in turn allows us to assess how prices for different goods varied over time and by geographical area. In a final stage we employ these estimates to extrapolate prices for a certain place and year where no price notation for that particular goods is available in order to value the wage payment.

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<sup>74</sup> Myrdal and Söderberg, *Kontinuitetens dynamik*, pp. 534–535.

The price regression we use is the following:

$$Price_{i,j,t} = \beta_1 Good_i + \beta_2 County_j + \beta_3 Year_t + \beta_4 (Good_i * County_j), \quad (1)$$

where  $Price_{i,j,t}$  is the price of goods  $i$  in county  $j$  at year  $t$ .  $Good_i$ ,  $County_j$ ,  $Year_t$  are dummies indicating the goods, county and year, respectively. Finally,  $Good_i * County_j$  is an interaction term capturing how the price of a certain good vary by geographical area. The regression is estimated using log-link GMM making it possible to estimate the regression in log form while values are subsequently converted back to their original form. The regression does a good job of predicting prices, the adjusted R2 is 0.90.

After estimating the way in which prices varied by type of good, county and year, we use the regression equation to predict the value of each allotment and payment that we observe in our wage dataset, allowing us to put a monetary value on the payment each worker received. Since we focus on comparing relative wages of men and women, we do not need to benchmark our estimate of nominal wages to a consumption basket.

### I.3. Female relative pay

To assess gender differences in pay, we estimate a regression that accounts for differences in average wages between places, our four HISCLASS groups, and whether the worker is male or female. The alternative of comparing averages between groups is not satisfying, as there are probably to be differences in the composition between them. In addition, comparing wage payments on a particular estate in a certain year could be sensitive to a small number of individuals underlying the comparison. The regression allows us to pool all observations across estates and years.

In the regression, we also permit gender differences in earnings to vary between workers with different levels of skill, allowing us to evaluate if women in different positions faced different relative pay. We estimate the following regression:

$$Wage_{i,j,t} = \beta_1 Sex + \beta_2 HISCLASS4 + \beta_3 (Sex * HISCLASS4) + \beta_4 Place_j + \beta_5 Year_t,$$

where  $Wage_{i,j,t}$  is the wage of individual  $i$  at place  $j$  at time  $t$ .  $Sex$  and  $HISCLASS4$  are dummy indicators measuring how wages vary by gender and skill.  $Sex * HISCLASS4$  is an interaction term capturing how gender differences in wages vary conditional on skill. Finally,

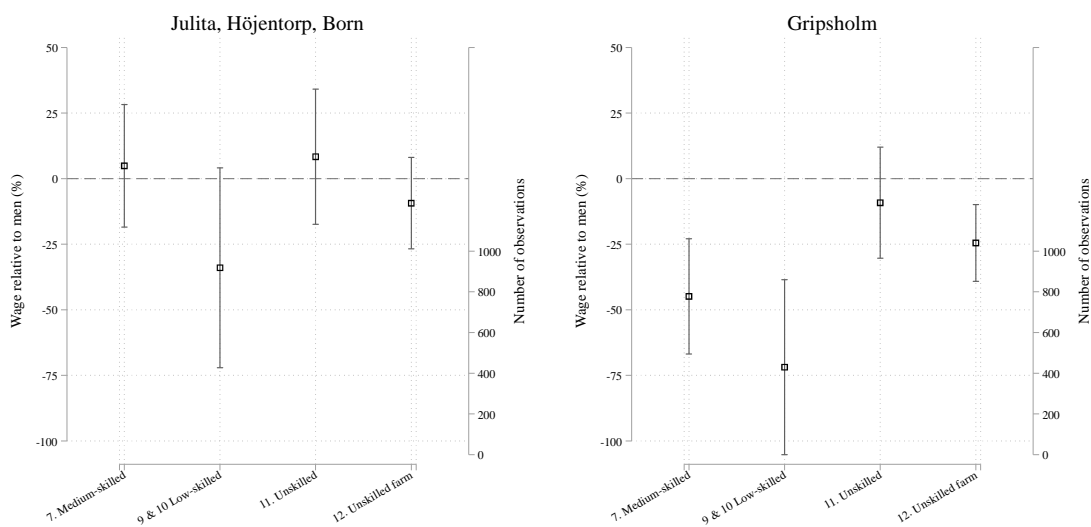


*Place* and *Year* are dummy variables controlling variation in wages between estates and across time. The regression is once again estimated using log-link GMM.

Figure 3 shows the resulting estimate for how wages varied between the sexes for the four groups of skill, divided between the three smaller estates of Julita, Höjentorp, and Born, and the larger estate of Gripsholm. Provided in the figure is also the number of observations underlying each estimate.

Focusing first on the differential between men and women in the unskilled group at the smaller estates, the assessment suggests that there was no statistically significant difference in pay. This is the case both among unskilled farm workers as well as for the non-farm group where the servants are found. This concurs with previous evidence on wage differentials for unskilled construction workers hired by the day in Sweden.<sup>75</sup> Our results suggest that this also extended to unskilled farm workers hired on yearly contracts, a type of employment much more common in early modern Europe than day labour.

**Figure 3: Female pay relative to men, by HISCLASS category**



*Note:* Results obtained from estimating equation 3. The figure shows point estimates of women’s relative wage in each HISCLASS category together with 95 percent confidence intervals.

*Sources:* see table 1.

At the smaller estates the pattern is similar for the more skilled group of workers. Our estimates suggest that for low-skilled and medium-skilled workers at Julita, Höjentorp, and Born, there were no differences in wages for men and women. In the case of the medium skilled, there is even some indication that women were earning more than men, but the difference is not statistically significant.

<sup>75</sup> Gary, *Work, wages and income*, pp. 23–25.

Turning to the situation at the larger Gripsholm estate, things look somewhat different. For the group of unskilled workers, gender differentials in pay were minor. In the case of unskilled farm workers, women earned about 25 percent less than men, while for the non-farm group there was no difference. However, among skilled workers, women's remunerations were noticeably lower than for men, however. For low-skilled workers, women earned about 50 percent of what men was earning, while for the medium skilled the differences were possibly larger yet.

Since men and women often performed different tasks, e.g., men scything and women tying in the harvest or women spinning and men weaving in some parts of the textile industry, it can be hard to directly compare men's and women's wages even within a skill-category.<sup>76</sup> On the estates in this study, women and men employed as farm servants tended to do different things: the women worked in dairy production and the men in arable farming and forestry. This is particularly true at the large Gripsholm estate, where the division of labour had been driven further. Furthermore, a recurrent discussion in research on women's and men's wages is whether if women were paid less because they were women – due to social norms – or because they produced less – due to lesser upper body strength or/and their reproductive role.<sup>77</sup>

#### I.4. Brewers and brewsters – the same wage for the same work?

One task performed by both men and women at the Gripsholm estate was brewing. As discussed above, brewing was regulated in detail, following centrally set production standards and the volumes produced were specified in the accounts.<sup>78</sup> At the studied estates, no indications have been found that men and women brewed different quantities and qualities of beer. This makes brewing within the organisation of the Royal demesnes a good source for studying gender wage gaps in sixteenth century Europe: they brew for the same employer, they used the same standardised recipes, and they used the same equipment and the same premises (women and men could alternate as brewsters and brewers at the estates).<sup>79</sup>

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<sup>76</sup> Drelichman and Agudo, 'The gender wage gap', pp. 354–357.

<sup>77</sup> Gary, *Work, wages and income*, pp. 28–32.

<sup>78</sup> Odén, *Rikets uppboord*, p. 82.

<sup>79</sup> In their study of wages in Toledo, Drelichman and González Agudo used nurse wages. The nurses only performed care work on people of their own sex (obscuring the role of the market as well as custom), were not allowed to marry, and finally productivity in medical care is known to be notoriously hard to measure. Drelichman and Agudo, 'The gender wage gap'.

The evidence on wage payments for brewers and brewsters suggest that there was no significant difference in pay. The point estimate suggests that, if anything, brewsters, in fact, earned 4 percent more than brewers and the difference is not statistically significant.<sup>80</sup>

Looking at the years where we have brewers and brewsters working side by side on the Gripsholm estate, presented in Table 4, confirms this. There is no indication that brewsters were systematically paid less than brewers. They occupy positions throughout the local distribution of brewers' and brewsters' wages at Gripsholm.

**Table 4: Number of brewers and brewsters and brewsters relative wage rank at Gripsholm**

Year	Number of brewers and brewsters			Brewster's wage rank
	Brewers	Brewsters	Total	
1573	1	1	2	1
1574	3	1	4	2
1575	7	1	8	3
1582	2	1	3	1
1583	2	1	3	3
1585	2	1	3	1
1587	2	1	3	1
1588	2	1	3	2
1589	2	1	3	1

*Sources:* Södermanlands handlingar 1573:4, 1574:14, 1575:9, 1582:1, 1583:1, 1585:18, 1587:14, 1588:3, 1589:10.

Although men and women were equally paid when they performed the same tasks, the organisation of brewing was under the influence of gender. As discussed above, men tended to brew at the big estates at which bigger quantities were produced and more than one person were often employed to brew. This process of masculinisation of traditionally female work was ongoing not just in brewing, also cooking and butchering show similar trends.<sup>81</sup> Tasks performed by women at the smaller estates were taken over by men at the bigger ones, which made the female share of the work force smaller at the bigger estates. Therefore, even if the wages were at similar levels at estates of different sizes, the relative number of employments for women were lower and even more so when specialisation increased.

<sup>80</sup> The 95 percent confidence interval spans the range from -31 percent to +39 percent.

<sup>81</sup> Pihl, 'Gender, labour, and state formation', pp. 704–706.

## 5. EMP, “Girl power” and the Little Divergence – a dead end?

In the sixteenth-century Swedish labour market, it is clear that men and women seldom stood in the same queues for jobs. In some lines, primarily those for unskilled work, men and women stood on relative equal terms, making access to the labour market easy for both sexes. In others, women were pushed back. This was the case in, for example, the food processing crafts. In some others, such as in management and the metal industry, they did not have the chance to join at all. It is therefore not possible to say as a general characterization that women’s access to the labour market was easy in Sweden, especially not in the segments of the labour market that made it possible to attain a strong and independent position.

As performers of unskilled work, women did in fact earn wages similar to men. In terms of employment, men dominated unskilled agricultural work, while women were in majority among the unskilled labour force in other sectors, at least at the smaller estates of Julita and Højentorp. At these units, women were also in a majority at medium and low-skilled positions. Among the estates in our study, the smaller estates approximate most closely the general labour market. Agricultural production with a low market integration created a demand for both female and male labour. At the big estate of Gripsholm, with a more diverse production and higher rate of specialisation among the staff, women were in a minority at all positions and a process of masculinisation was in effect. Here we also find the biggest wage differences between men and women, even though it seems to be related to different tasks rather than different pay for the same tasks, as illustrated by the case of brewers and brewsters.

Our study shows that Gary’s findings of high female relative pay in unskilled casual work extended also to employees on yearly contracts. Swedish wages, especially of servants, or unskilled in general, seem therefore to have been driven by supply and demand. In the sixteenth century, women’s labour was highly in demand after and remunerated on par with men in the same sector. From the early seventeenth century, women’s day wages fell in relation to men’s due to a fall in demand.<sup>82</sup>

Since at least the late Middle Ages, the Swedish state had tried to regulate both annual and day wages of male and female servants. In a regulation from 1523, the day wage

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<sup>82</sup> Gary, *Work, wages and income*, pp. 17–24.

for a female servant was set to 0.6 of a male wage, the annual wage was even lower: 0.4.<sup>83</sup> In the latter part of the century, the gender wage gap seems to have disappeared. In a regulation from Stockholm in 1573, the female and male annual wages were set at the same level.<sup>84</sup> At the time, Stockholm was in a phase of expansion and if Stockholm followed the same pattern as other European towns, the demand for female labour was high.<sup>85</sup> The regulation from Stockholm fits well with the results in this study, as well as the situation depicted by Gary. The late sixteenth century was a period of high wages, driven by a demand for women in work characterized by low skill and in subordinated positions. A high demand for women's labour, caused by an expanding state apparatus or an urban expansion in the case of Stockholm, put women's wages close to those of men.

Within the Swedish version of EMP, young women had the opportunity as unmarried to leave their parental homes and become servants and earn a living. The position as servant, however, put them in a subordinated position under a master or a mistress.<sup>86</sup> Men and women serving as servants were working under a labour legislation forcing people of no or little wealth to take service. They were prescribed to work on annual or half-year contracts, working for day or piece wages were for these people not an alternative.

According to de Moor, de Pleijt and van Zanden the EMP made it possible for women to remain single, or to gain a strong position within a marriage due to their position on the labour market. The assertion presupposes that there existed a labour market with relatively high wages for women. Even though Swedish women had the possibility to acquire the skill of a strong body, making them capable of enduring a long workday, few of them would be given the opportunity to develop other skills, harder to access, for example in the crafts or management. In addition, it seems to have been even harder for women to get their 'abilities' recognized and remunerated as skilled. Both young men and women could quite easily find positions as servants, and in many cases, law forced them to. Nevertheless, the problem was to make a career. We find few examples suggesting that a period in service was a chance for young women to acquire skills, useful for a career or other ways of establishing an independent position and control of their own lives. Furthermore, few new jobs for women were created within the sectors of the economy that were expanding at the time: the metal industry, big estates, and the state administration.

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<sup>83</sup> Sommarin, *Arbetsförhållanden vid svenska bergverk och bruk*, pp. 65–70; Boëthius, *Gruvornas, hyttornas och hamrarnas folk*, p. 76.

<sup>84</sup> Riksarkivet, *Strödda äldre räkenskaper, ny serie, Varuvärderingar från äldre vasatiden vol. 1*.

<sup>85</sup> Ewan, 'Female domestic servants', p. 14.

<sup>86</sup> Lindström, Hassan Jansson, Fiebranz and Jacobsson, 'Mistress or maid', p. 246.

An essential difference between men and women's ability to take power over their lives was laid in how their work was remunerated. Men at higher positions and in skilled work could set up households and form families of their own. Instead of an annual salary including bed and board, these men were given an assortment of basic commodities (*beställningar*), such as grain, meat, and hay to a horse or a cow. They could either sell the commodities or process them in their own households. In the latter case, someone had to take care of the household, and consequently these men were often married.<sup>87</sup> Women were never given this type of remuneration; they either lived in the big households of the estates, or together with men with this type of contract. A woman's wage or employment at a skilled position were never the basis for a new household.

Our results also contrast Denison and Ogilvie's conclusion that women's wages were suppressed during the period as a result of oppressing nonfamilial institutions. A high demand for labour in some segments of the labour market resulted in female and male wages that were on par. While the institutions highlighted by Denison and Ogilvie seem not to have played a prominent role in sixteenth-century Sweden, more subtle forces seem to have been active. There were no formal regulations stating that a man should take over a woman's work to brew when the estate reached a certain size, and there were no laws nor statutes saying that only male employees could be given the opportunity to form their own households instead of receiving an annual wage and bed and board at the estate. But this was likewise the situation facing women.

## 6. Conclusions

In this study, we have examined women's work and relative wages in sixteenth century Sweden using a unique source from the royal demesnes, which hired both men and women in different sectors and occupations across the skill distribution. Our study contrasts the idea that the EMP can explain the ascendancy of the North Sea region in the centuries following the Black Death. The Swedish case presents a conundrum for the "Girl power" hypothesis, since the country remained an economic laggard in the Early Modern period despite displaying an extreme form of the EMP.

Our results demonstrate that there was a "golden age" in Sweden for women in terms of relative wages for unskilled work, but that women's work was restrained in many other ways, including their ability to acquire skills and to access higher skilled jobs. With the words

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<sup>87</sup> Pihl, *Arbete*, pp. 158-162, 197-200

of van Zanden et.al., women's "opportunities to take control over their lives" seem to have been severely restricted compared to men's.<sup>88</sup> In this sense, our work mirrors recent results from research on the Iberian Peninsula. Drelichman and González Agudo show that wages in early modern Castile was not set according to custom, but responded to economic conditions in the same way as in North-Western Europe. They conclude, just like we do, that despite similar wages, women faced more restricted occupational possibilities.<sup>89</sup> A similar situation seems to have been present also in Portugal.<sup>90</sup> Competitive markets for women's labour thus seem to have been a pan-European phenomenon, but so do women's subordination and lack of access to jobs that could provide a springboard for economic independence.

Altogether, our results illustrate the danger of using relative wages to make inference about women's autonomy. Anyone who intends to draw conclusions on the labour market in general and on women's bargaining positions in particular, on the basis of wages to unskilled and unmarried young people, needs to be careful. From a Swedish perspective, the connection between EMP and a strong position of women seems to be tenuous.

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<sup>88</sup> de Moor and van Zanden, 'Girl power', p. 15.

<sup>89</sup> Drelichman and Agudo, 'The gender wage gap', pp. 375-376.

<sup>90</sup> Palma, Reis and Rodrigues, 'Historical gender discrimination'.

## Appendix A: Sources for prices

**Table A1:** List of sources for price notations

Source	Region/province	Period	Goods covered (number of observations within parentheses)
Borgmästare och råd före 1636, housed at the Swedish National Archives (Riksarkivet, RA) in Stockholm	Stockholm	1576 – 1603	Baltic herring (1), Baltic herring, salted (1), Beef (1), Beer (25), Boots (1), Bread (1), Butter (17), Cheese (9), Cloth (1), Dried fish (3), English cloth (9), Gloves (1), Görlitzian cloth (8), Herring (13), Hops (1), Linen (9), Malt (1), Münsterian cloth (1), Ox (1), Oxhide (1), Rostockian beer (3), Salmon (13), Shoes (3), Rye bread (1), Salzwedelian cloth (1), White bread (1)
Dalarnas handlingar, Borns hyttegård (RA)	Dalarna	1576–1598	Coarse linen (1), Shoes (1), English cloth (2), Pork (4), Görlitzian cloth (1), Gloves (1), Hops (6), Lard (4), Cow (1), Barley (2), Salmon (1), Thin linen (1), Candles (3), Linen (1), Münsterian cloth (2), Oxhide (1), Turnips (1), Salt (7), Salzwedelian cloth (1), Sill (2), Butter (5), Baltic herring (2), Bricks (4), Wadmal (4), Wheat (2), Eels, salted (1)
Hertig Karls räntekammare (RA)	Södermanland	1595–1599	English cloth (1), Görlitzian cloth (1), Linen, Hälsingland (1), Thin linen (1), Linen (1), Dutch cloth (1)
Smålands handlingar, Strömsrums gård (RA)	Småland	1562	Course linen (1), Brabantian cloth (1), Shoes double soled (1), English cloth (1), Shoes (1), Calf hide (1), Butter (1), Wool (1), Wadmal (1)
Södermanlands handlingar, Eskilstuna gård (RA)	Södermanland	1571–1606	English cloth (5), Pikes (8), Görlitzian cloth (1), Linen, Hälsingland (1), Hops (9), Cloth (1), Cowhide (1), Barley (2), Salmon (6), Linen (10), Linen, Dutch (1), Linen, double with (2), Malt (1) Rye (1), Rye flour (1), Salt (10), Herring (7), Baltic herring (9), Lard (3), Cod (3), Wadmal (1), Wheat (2), Peas (2)
Södermanlands handlingar, Gripsholms slot (RA)	Södermanland	1539–1601	English cloth (2), Pikes (1), Görlitzian cloth (2), Linen, Hälsingland (7), Hops (6), Cloth (2), Dried herring (2), Salmon (2), Thin linen (2), Linen (6), Linen, double with (1), Malt (2), Dutch cloth (1), Turnips (1), Rye flour (1), Salt (6), Herring (2), Baltic herring (10), Dried fish (5), Wheat (1)
Södermanlands handlingar, Julita gård (RA)	Södermanland	1575–1601	Pikes (1), Humle (12), Barley (2), Dried herring (2), Salmon (4), Flour (1), Rye (2), Salt (4), Herring (1), Butter (7), Grain (1), Baltic herring (8), Cod (1), Wheat (1), Peas (1), Eels (4)
Södermanlands handlingar, Rävns gård (RA)	Södermanland	1573–1602	Pikes (2), Görlitzian cloth (1), Hops (6), Cloth (1), Cowhide (1), Barley (2), Salmon (1), Linen (2), Oxhide (1), Turnips (2), Rye flour (5), Salt (5), Herring (2), Butter (2), Baltic herring (7), Steerhide (1), Cod (3), Wheat flour (1)



Södermanlands handlingar, Tynnelsö gård (RA)	Södermanland	1588	Thin linen (1), Linen (1), Linen, Dutch (1), Wadmal (1)
Södermanlands handlingar, Svartsjö och Väntholmens gårdar (RA)	Södermanland	1600	Cod (1), Oxhide (1), Shoes (1), Butter (1), Grain (1)
Upplands handlingar, Gamla och nya ladugården Stockholm (RA)	Stockholm	1599	Dried herring (1), Malt (1), Ox (1), Salt (4), Butter (1), Baltic herring (1), Cod (3), Wadmal (1), Beer (1)
Upplands handlingar, Sickla och Hammarby ladugårdar (RA)	Stockholm	1566, 1568	Fish, fresh (1), Goat skin (1), Pikes (1), Skin skirt (1), Baltic herring (1), Cod (1)
Upplands handlingar, Danvikens hospital (RA)	Stockholm	1566-1603	Baltic herring (17), Baltic herring, salted (1), Barley (1), Beer (1), Butter (8), Cheese (4), Cod (9), Cow (2), Cowhide (3), Dried beef (1), Dried fish (1), Dried herring (11), Görlitzian cloth(1), Heifer (1), Herring (13), Eel, salted (2), Gloves (1), Grain (1), Hops (4), Linen (10), Malt (3), Ox (10), Oxhide (4), Rye (2), Salt (24), Salmon (7), Salted fish (1), Skin skirt (1), Peas (6), Perch (4), Pike (6), Pike, salted (2), Turnip (1), Wadmal (3)
Upplands handlingar, Stockholms slotts ladugård (RA)	Stockholm	1601-1602	Baltic herring (1), Butter (2), Linen (3), Rye bread (1), Wheat (1), White bread (1)
Upplands handlingar, Stockholms slot (RA)	Stockholm	1580	English cloth (1), Görlitzian cloth (1), Barley (1), Thin linen (1), Linen (1), Linen, Dutch (1)
Varuhus och handling (RA)	Stockholm	1562-1595	Barley (2), Butter (4), Course linen (1), Cowhide (2), English cloth (3), Görlitzian cloth (2), Linen, from Hälsingland (2), Linen (3), Linen, Dutch (1), Malt (3), Münster cloth (2), Ox (1), Oxhide (1), Rye (3), Salzwedelian cloth (2), Stendalian cloth(1), Wadmal (1), Wheat (1), Wool (1)
Varuhus och handling, Handlingsregister (RA)	Stockholm	1563	Pork (1), Beef (1), Butter (1)
Västmanlands handlingar, Kungsörs gård (RA)	Västmanland	1576-1591	Pork (1), Pikes (4), Görlitzian cloth (1), Hops (8), Cloth (5), Salmon (7), Thin linen (3) Linen (8), Münsterian cloth (1), Ox (1), Linen, Dutch (1), Rye (1), Salt (1), Salzwedelian cloth (4), Herring (9), Butter (2), Grain (1), Baltic herring (8), Dried fish (3), Cod (2), Peas (2)
Västmanlands handlingar, Strömsholms gård (RA)	Västmanland	1557	Course linen (1)
Västergötlands handlingar, Höjentorps gård (RA)	Västergötland	1570-1589	Baltic herring (1), Barley (1), Butter (3), Carp bream (1), Course linen (4), Cod (1), Cowhide (1), Dried fish (2), Flour (1), Grain (1), Herring (1), Hop (8), Linen (3), Linen, Dutch (1), Malt (3), Ox (1), Oxhide (1), Pike

			(5), Pork (1), Salmon (2), Salt (4), Wadmal (1)
Västergötlands handlingar, Brunnsbo gård (RA)	Västergötlands	1564–1569	Bread (1), Groat (1), Pikes (1), Hops (6), Barley (1), Beef (1), Malt (1), Salt (1), Butter (1), Pees (1)
Västergötlands handlingar, Götala gård (RA)	Västergötland	1588–1590	Coarse linen (1), English cloth (2), Görnitzian cloth (1), Linen (4), Malt (2), Münsterian cloth (1), Ox (2), Rye (3), Rye flour (1), Herring (1), Butter (1), Dried fish (1), Wadmal (1), Peas (1)
H. Forssell, <i>Sveriges inre historia från Gustaf den förste: med särskildt afseende på förvaltning och ekonomi 2.</i>		1560–1580	Brabantian cloth (1), Lübeckian cloth (1), Münsterian cloth (1), Stendalian cloth (1)
J Hallenberg, <i>Historisk afhandling om mynt och warors värde i Swerige, under konung Gustaf I:s regering.</i>		1555–1558	English cloth (1), Butter (1)
L. Hedberg, <i>Företagarfursten och framväxten av den starka staten : hertig Karls resurs-exploatering i Närke 1581-1602</i>	Närke	1581–1602	Bread (2), Fisk, färsk (2), Pork (2), Sheepskin (2), Glovs (2), Hops (17), Calfhide (2), Cow (2), Cowhide (2), Barley (11), Beef (2), Salmon (2), Cheese (2), Ox (2), Oxhide (2), Barley (14), Salt (17), Shoes, dubbel soled (2), Butter (2), Baltic herring (21), Steer (1), Steerhide (2), Boots (2), Svenne beer (2), Planks (2), Lard (2), Dried fish (2), Wheat (10)
A. Jansson and J. Söderberg, "Priser och löner i Stockholm 1600-1719"	Stockholm	1534–1610	Beer (44), Hops (70), Barley (51), Ox (57), Rye (59), Salt (51), Herring (52), Butter (61), Baltic herring (31), Lard (50), Linen (3), Bricks (51), Wax (48), Firewood (66), Wadmal (3)

Note: Number of observations in parenthesis.

## Appendix B: HISCLASS classification

**Table A2:** The HICLASS scheme

Number	Title
1	Higher managers
2	Higher professionals
3	Lower managers
4	Lower professionals, clerical and sales personnel
5	Lower clerical and sales personnel
6	Foremen
7	Medium-skilled workers
8	Farmers and fishermen
9	Low-skilled workers
10	Low-skilled farm workers
11	Unskilled workers
12	Unskilled farm workers

**Table A3:** Classification of occupations into the HISCLASS scheme

7. Medium skilled	Bakeress (75), Cookess (44), Shoemaker (24), Butcheress (18), Blacksmith (45), Brewster (28), Cook (19), Butcher (16), Brewer (14), Boatbuilder (14), Cooper (13), Miller (15), Carpenter (11), Blacksmith apprentice/hand (10), Bakeress and brewster (4), Bakeress and weaveress (2), Glazier (1), Mason (2), Bakeress, brewster and maltsteress (1), Butcher och hempspinner (1), Joiner (1), Tailor (1)
9. & 10. Low skilled	Sulusmältare (66), Mälterska (23), Mjolkdeja (21), kopparsmältare (20), sullusmältare (19), mjolkdeja (18), källarsven (15), kolare (15), tegelslagare (14), vaktmästare (11), Väverska (10), sågare (8), Källarpiga (8), skinnare (8), humlegårdsmästare (7), Trädgårdsmästare (7), trädgårdsmästare (6), svarvare (5), svavelbrännare (4), Sågare (3), Theggell brender (1), Mälterska och Bryggerska (1), Jägare 1, Väverska och Ladugårdspiga 1, Trädgårdsmästares hustru 1, tegelsagare 1, Kalkbrännare1, Tegelslagare1, Mjolkdeja, fd1, Mjolkdeja och bryggerska 1, Trädgårdsmästare 1, ålfiskare 1, väverska 1, svrvare 1, trågålmestare

	på förstrchningh anno 91 1, fågelskytt 1, vindebyggare1, Lagger1, Väverska och Tökerska 1, Humlegårdsmästare1, Mjölkerska 1, krutbrännare 1 Källarsven 1, Kolare 1, mölkedeya 1, Vaktmästare 1, Källarpiga, Bryggerska och Väverska 1, kollarre wed hamaren 1, Skinnare 1, Mälterska och torkerska 1, mjökdeja 1
11. Unskilled	fataburspiga (103), rostvändare (43), kvarndräng (33), slottsiggare (32), båtsman (32), Fataburspiga (27), gruvdräng (24), bryggardräng (23), stugkona (19), kockdräng (19), hyttedräng (16), skomakardräng (14), slaktardräng (12), tunnbindardräng (12), grovsmedsdräng (10), klensmedsdräng (9), Fatburspiga (7), vattukonsten (7), piga (7), bösskytt (6) tegelslagardräng (5), väktare (5), bagerskepiga (4), bakerskepiga (4), Smeddräng (3), murarmästaradräng (3), stugpiga (3), snickardräng (3), Stugkona (3), lakej (3), tunnbindradräng (2), slottskolare (2), kockpojke (2), smedsdräng (2), Båtsman (2), gårdztyennere (2), Fatburshustru (2), Mylkepiiga (1), vaktadräng (1), mältpiga (1), Smededräng (1), smedjedräng (1), mälterskepiga (1), kockpojke (1), Fatburspiga och redsven (1), killerepiga (1), Nycklepiga (1), vindvaktare (1), Nychlepige (1), ståldräng (1), hyttedräng (1), En lithen målare poike (1), Nyclepiga (1), gårdztiennere (1), Fatburspiga och källarsven (1), båtbyggardräng (1), båtsman (1), Båssman (1), stoffkonna (1), slottliggare (1), kalkslagare (1), frustuguflicka (1), Bösskytt (1), vaktarkarl (1), Nyckelpiga (1), Stugukona (1), Fataburspiga och under stundom Redsven och Källarpiga tjänade 0,5 år (1), vindevaktare (1), skoamakrdräng (1), fatteburspiga och weffuerska (1), fatteburspige och Veffuerska (1), målardräng (1), siktare (1), mjölnardräng (1), koche drenng (1), Svarvare och djurvaktare (1), brygiaredreng (1), Smedjedräng (1), kolardräng (1), Gårdstjänare (1), vaktare (1), fateburspiga (1), kokedräng (1), fatteburspiga (1), Småsven (1), rostläggare (1), nöcklepigi (1)
12. Unskilled farm	legodräng (270), Legodräng (153), trädgårdsdräng (90), fiskare (87), fäpiga (86), Fiskare (76), lagårdsdräng (52), lagårdspiga (26), fäkona (18), Fäkona (17), Trädgårdsdräng (17), Legedreng (16), Ladugårdspiga (15), legopiga (15), Fäpiga (15), ladegårdspiga (15), ladegårdskvinnfolk (14), fädräng (13), djurvaktare (10), Legedrenger (9), Legedranger (9), veddräng (9), Legedrenng (8), gårdsdräng (6), lego drenger (5), dräng (5), stalldräng (5), fiskere (4), Svennepiga (4), fischiare (4), fiskiara (4), Fädräng (4), Trädsgårdsdräng (4), Legodrenng (4), humlegårdsdräng (4), feschiare (4), oxdräng (3), Stoldrengh (3), firskardräng (3), lego drennger (3),

	<p>Legogosse (3), Fägosse (2), Svinpiga (2), Fäkona för 92 (2), Fäpiga i gechebodha (2), Fårapiga (2), Svinkona (2), Mjölkpiga (2), fiskardräng (2), Fårgosse (2), Valldräng (2), Stodvaktare (2), drabant (2), Fårpiga (1), som Ryctor werchhestar (1), fälldräng (1), Gossepiga (1), hunddräng (1), ryktade verkhästarna (1), Trädgårdsdräng (1), trädgårdspjke (1), Fåradräng (1), fökona (1), Stoldrengh (1), Földräng (1), firskare (1), Trägårdsdräng (1), Oxdräng och fädräng (1), Dräng (1), Svenpiga (1), Fäkarl (1), Stodväktare (1), verkdräng (1), Trädgårdsräng (1), Oxdräng (1), Drägårdsdräng (1), Hönsdeja (1), Fökona (1), värkdräng (1), Vallpiga (1), legedrengh (1), Legodräng, Oxdräng och Fädräng (1), verkpoyke (1), Jägardräng (1), Tökerska och Fäpiga (1), Fåledräng (1), trädgårdsdrängar (1), Legodräng, Kalkbrännare (1), Oxkarl (1), Svin- och fårpiga (1), Vedhuggare för 09 och 10 (1), Svindeja (1), Grefue Axell Stensons staldrengh (1), hestdrang (1), Gammal ladugårdspiga (1), stoldrengh (1), gårdssdräng (1), oxadrengh (1)</p>
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*Note:* Number of observations in parenthesis.

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