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**THE WAGES OF WOMEN IN ENGLAND,1260-1850**

Jane Humphries and Jacob Weisdorf

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# THE WAGES OF WOMEN IN ENGLAND, 1260-1850<sup>1</sup>

Jane Humphries (Oxford)

Jacob Weisdorf (Odense and CEPR)

## Abstract

This paper presents two wage series for unskilled English women workers from 1260 to 1850, the first based on daily wages and the second on the remuneration per day implied in annual service contracts. These two series are compared and the series for women's daily wages is also compared with evidence for men, revealing interesting trends in the gender gap. These comparisons inform several recent debates: first whether or not "the golden age of the English peasantry" included women; and, second whether or not protoindustrialization and early industrialization provided women with greater opportunities. Our contributions to these debates have implications for wider analyses of growth and wellbeing. For example, historians have argued that the rise in wages that followed the Black Death enticed female servants to delay marriage so contributing to a *European Marriage Pattern*, a demographic regime believed to enable modern economic growth. However, our findings suggest that servants did not benefit much in the post-plague era and so offers little in support of a 'girl-powered' economic breakthrough in England. Similarly, historians have hypothesized that high wages in the eighteenth century explain the labour-saving technological changes which kick-started the industrial revolution and, recently, that women shared in these high wages. Again our findings suggest a less rosy scenario with women who were unable to commit to full-time work losing ground relative to men and to their less constrained peers; such women fell increasingly adrift from any *High Wage Economy*.

*Keywords:* Black Death; England; gender wage gap; industrial revolution; wages; women.

*JEL Codes:* J3, J4, J5, J6, J7, J8, N33

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## **I Introduction**

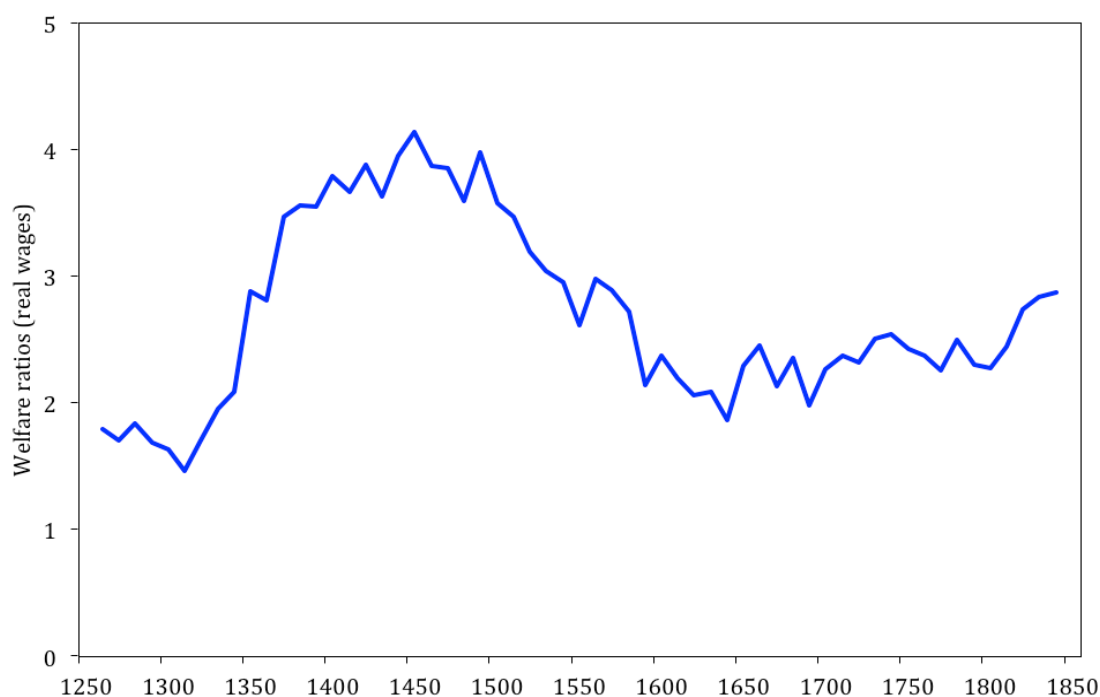
The graph below is familiar to economic historians for trends in men's real wages have been used to indicate developments in wellbeing, map structural changes in employment, drive demographic developments and, in recent accounts, even explain the causes and chronology of the industrial revolution. Yet adult men constituted a minority of the population, not all families had male breadwinners, women played a role in the decision when to marry (and hence the size of families), and labour markets and their wage outcomes were segmented. Researchers have recognised such complications. Several have tried to document women and children's economic experience in different times and places; but they have not attempted to match the well known evidence on the evolution of male wages with comparable series for women workers. It is easy to see why. Women's economic activities are hard to document. Data on their remuneration is fragmentary and difficult to interpret. Women were more likely paid as part of a team, by task or in kind. Day wages, where they exist, are hard to compare with longer term contracts which usually involved a significant element of board and lodging for which a value must be imputed. Yet a female wage series would seem vital to any progress not only in gendering accounts of British economic history but in refining the mainstream narrative. Are the scarcity of data and the problems with the data that exists insurmountable? Our answer is a resounding no!

This paper has compiled a great deal of evidence on women's wages and developed various ways by which to circumvent the problems noted above. The result is the first long-run wage series for unskilled women workers. We stand on the shoulders of other economic historians who have assembled data for particular periods (for example, Whittle, Burnette, and Field). Some of our work has involved linking this material with other secondary sources, but we have added sizeable amounts of new data drawing on over 145 distinct sources

providing a total of 5,699 observations of wage payments spread over 600 years. Our series rest on this impressive data collection.

**FIGURE 1**

THE REAL WAGES OF UNSKILLED MALE FARM LABOURERS (BY DECADE)



*Note:* The real wage is computed as the annual nominal wage divided by the annual cost of a consumption basket (see text). The annual wage is obtained by multiplying the daily wage rate by 260 days. *Sources:* Wages: Clark (2007). Cost of consumption basket: Allen (*Link*).

Section II provides a guide to our sources, explains the methods used to construct the series, and introduces the main findings. As both the existing secondary literature and any familiarity with the primary sources suggests, there were two distinct forms of female employment: daily wage labour, often on a casual basis, and annual service, which usually involved living in and so was partially remunerated in the form of room, board and other perquisites. We have collected and processed wage data relating to both kinds of employment

and so provide two separate series: the first relating to daily wages and the second to the equivalent remuneration implicit in longer term contracts. The former is comparable with the wages of unskilled men and can be used to track the gender gap over time. In addition, an original aspect of our study is the ability to compare our two female series and see when women could benefit by opting for one or the other form of employment. Our findings here are striking. For example, for long periods of time, in fact from the Black Death until the late 1500s, women's daily or weekly wages from casual or short-term work exceeded the implicit equivalent available from annual service. Of course, casual employment did not provide the continuity of support that was available via a longer commitment; wage differentials included a premia for the risk of periods without work, which probably varied over time. However, our evidence extends to women workers and puts on a firm empirical footing the suspicion that medieval and early early modern day labourers could collect higher sums by working day rates than from a yearly wage (Richie, 1962, p.93; Penn and Dyer, 1990, pp. 368-70; Poos, 1991, 222-5; Youngs, 1999, p. 158). Much later, in the era of industrialization, we find this relationship reversed with the daily wages implicit in longer term contracts outstripping falling casual day rates for women workers. More generally, the differences between women's daily and longer term wages reveal the working of the market for female labour and cast light on several unresolved debates in economic history.

One such debate is taken up in section III, which explores whether "the golden age of the English peasantry" allegedly inaugurated by the Black Death included women (Goldberg, 1986; Mate, 1985). Did increases in women's wages represent a gendered silver lining to population collapse (Hatcher, 2001; Langdon, 2011)? Or were women excluded from the benefits deriving from the tight labour market, trapped by patriarchal custom and practice in low-paid work (Bennett, 1988; Bardsley, 1999)? Our separation of day wages from the

rewards implicit in servants' pay turns out to provide fresh insight. Female casual wage-earners benefitted in the short term from demographic collapse but unlike their male peers did not appear able to sustain gains in the long run, as women's pay eventually fell back from the dizzy heights achieved in the second half of the 1300s. Significantly, women on annual contracts seem to have been particularly powerless to progress beyond pre-plague customary wages following the Black Death. Possible explanations include the suggestion that attempts to control workers' movements and cap pay through the Ordinance of Labourers (1349), the Statute of Labourers (1351) and the Statute of Cambridge (1388) (Putnam, 1908; Penn and Dyer, 1990) bore particularly oppressively on female workers. The legal framework and its patriarchal context did not encourage women to display the independence and mobility needed for success as casual workers. Longer term service contracts provided a way of controlling women workers and keeping wages down.

Our doubts about the robustness of rewards to longer term employment has important ramifications since both De Moor and van Zanden (2010) and Voigtländer and Voth (2013) have linked the growth of Western European economies to the demographic and economic legacy of the Black Death. De Moor and van Zanden and Voigtländer and Voth interpreted Hajnal's (1965) identification of distinctive east-west demographic regimes in terms of differences in female economic opportunities and linked these to different subsequent growth trajectories. Improved wages and opportunities for women in the west changed demographic behaviour delaying marriage, promoting celibacy and reducing fertility, with the resulting so-called *European Marriage Pattern* then further raising incomes and promoting economic growth. Our new empirical evidence and particularly the relatively high rewards to casual employment, open to married as well as single women, and relatively low rewards to annual

service, by and large restricted to single women, until around 1550 casts doubt on the standard story.

Section IV takes the comparison between women's casual daily wages and the day rates implicit in annual contracts forward into the early modern and industrial eras, where it informs the longstanding debate about the effects of industrialization on women's economic opportunities, dependence on men and overall wellbeing (for a recent survey of this debate see Goose, 2007). The gap between the types of women's wages narrows and reverses, with those associated with annual contracts moving ahead temporarily in the late 1500s and then markedly and consistently after 1750. The differential evolution of casual and annual wages reflects the disappearance of well-paid casual work for women in agriculture associated with the closure of the countryside and the disappearance of subsistence production (Humphries, 1991; Burnette, 2007) as well as the rise and subsequent decline of hand-spinning and other protoindustrial activities (Valenze, 1995; Muldrew, 2012) in contrast to the improved prospects for women workers who were able to work regularly and away from home. Scrutiny of men's and both types of women's wages in this era suggests that women who were only able to work occasionally or seasonally, presumably disproportionately married women, became more dependent on men if they were to share in the gains promised by modern economic growth.

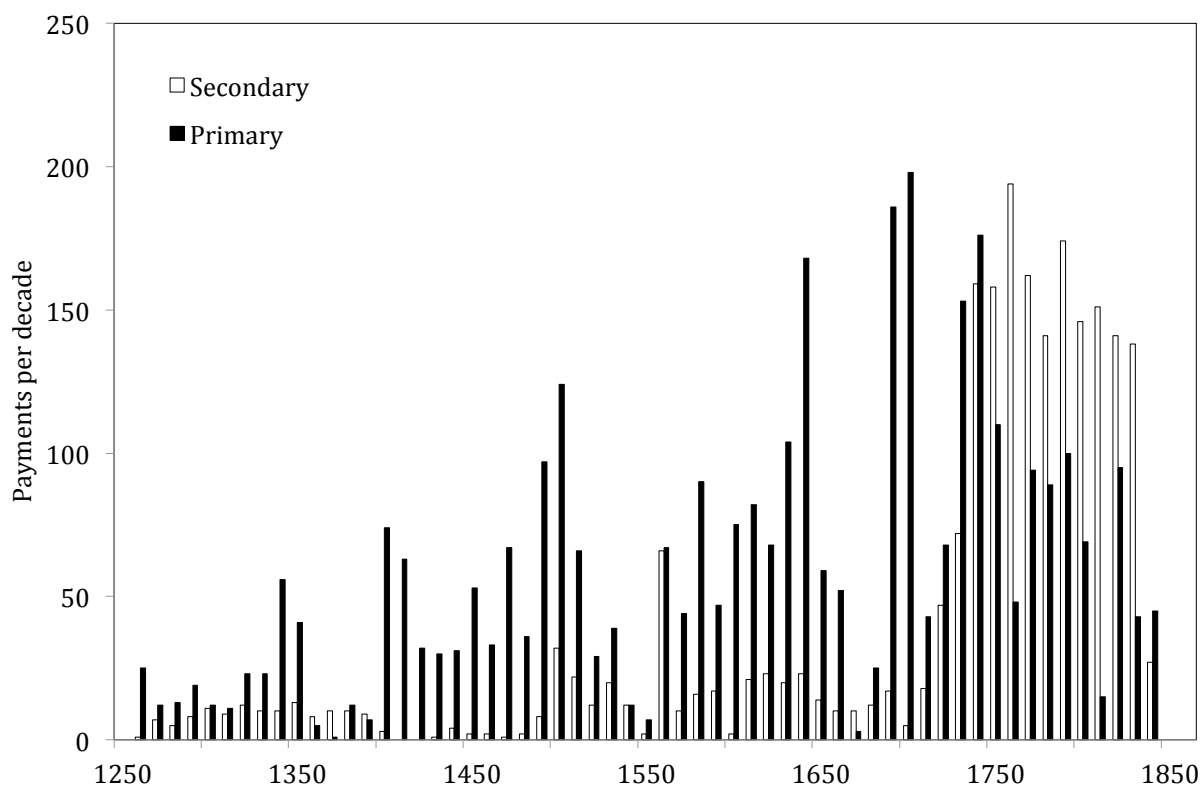
## **II**

### **Data and Methodology**

Various problems, as noted above, are endemic to the historical record on women's wages. This section explains how we have dealt with these problems while building our series. We began by assembling the material from well-known secondary sources, based on particular bodies of primary data. Several authors generously shared their data files as acknowledged

above; thus the period after 1750 is particularly well documented (see figure 2). Material was also extracted from classic accounts by for example Thorold Rogers and William Beveridge. Other secondary sources, as listed in the bibliography, were searched for additional observations. However, evidence from secondary sources is patchy as figure 2 demonstrates, leaving huge swathes of time inadequately documented.

**FIGURE 2**  
THE FREQUENCY OF PAYMENTS (BY DECADE)



We put considerable effort into minimizing gaps, adding material from diverse sources, both archival and printed primary, including: manorial accounts, farm accounts, wage books, household accounts, Chamberlains' accounts, Churchwardens' accounts, settlement examinations, diaries and memoirs. Gainsaying the view that women's wages are insufficiently documented, we have uncovered substantial evidence. Our sources cover



provincial and peripheral areas, making it comparable to the authoritative series for unskilled male farm labourers provided by Clark (2007)<sup>2</sup>. Like Clark, we have avoided London which had a distinctive high-wage labour market and we have excluded harvest wages. Figure 2 below shows the extent of the additional data collection.

The new material shatters some stereotypes of women's work. For example, several sources record women employed on early modern construction sites, including that of Blenheim Palace! To illustrate, the account book of New Haven, Chester, 1567-8, records women involved in preparatory tasks: moving stones at a standard rate of 3d per day. Later, when a "crane" was installed to lift the stones into place, women were regularly and in some numbers employed to set the machinery in motion via a sort of treadmill, "mayds in the craine" becoming a regular charge (Rideout, 1928).

Building a wage series from such heterogeneous sources required care and consistency. One obvious problem is that geographically, seasonally and occupationally diverse sources carry the potential for distorting compositional effects, especially as in some periods we are forced to rely on few observations. We tried to limit such dangers by excluding London, but otherwise seeking a wide but consistent geographical coverage, dropping all harvest wages, drawing as a rule on several sources per time period, following other authors (notably Clark) in using decadal averages and linear interpolation to cover gaps, and focussing exclusively on relatively homogenous adult unskilled workers.

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<sup>2</sup> We searched many of the identical sources cited by Clark in papers reporting his findings for male wages, supplementing these by women's wages reported in alternative editions of the same kind of sources, such as churchwarden's accounts, grassmen's accounts, etc., and by household and farm accounts.

To separate skilled from unskilled workers, we use the so-called HISCO/HISCLASS system. HISCO categorizes over one thousand historical occupations by the type of work performed (van Leeuwen et al 2002). Subsequently, labour historians have ranked the coded occupations based on an assessment of the working skills required (van Leeuwen and Maas 2011), and we use this HISCLASS taxonomy, to ensure that all wages in our database were paid to women whose work was categorised as unskilled. What kinds of female jobs have been excluded as a result? We have left out observations which relate to domestic servants with managerial responsibility (housekeepers, ladies maids, nurses), and ignored skilled domestic manufacturers (weavers, lacemakers, glovers) and midwives, schoolteachers and governesses.<sup>3</sup> Thus Sir Thomas Puckering's wife's "waiting gentlewoman" paid the princely sum of £6 per annum in 1620 is excluded while his "Drudg Maide" paid £1 10s, and his chamber maids, working maid, dairy maid, laundry maid and "Malt-maide and Powltrie-Crammer" all feature (Merry and Richardson, eds., 2012).

A more fundamental issue is illustrated by the examples listed in table 1. Those appearing in the left-hand column relate to day wages even when a specific task is reported (as in the case of Ann Parry). Those on the right concern annual contracts where remuneration almost always included other perquisites: board, lodging and clothing allowances. As noted above, we collected both kinds of wage data. Thus alongside Puckering's women servants, we included the wages he paid to the women he hired casually to help with the washing, weed his garden, and rake up the fallen leaves in his orchard (Merry and Richardson, eds., 2012). Daily wages represent 29%, weekly wages 3% and annual wages 68% of total observations (totalling 5,868 payments).

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<sup>3</sup> Spinners were almost always paid by the piece and turning their remuneration into day wages raises additional complications (see, Muldrew, 2012). For the time being they are excluded from our series but we have made reference to other authors' estimates for benchmarking purposes.

**TABLE 1**

**OBSERVATIONS OF WOMEN'S WAGES**

- Oxfordshire manor of Glympton, in 1324, two women were paid 1s 6d “for cleansing the wheat in sheaves for sowing” for 12 days “each one taking by the day  $\frac{3}{4}$ d”
- In 1530, William Brereton of Malpas paid 11 women for 2 days work “sheryny of shepe, every women 4d the daye”
- Tudor Churchwardens of Knebworth paid 2 women for sitting up with a sick neighbour day and night for 9 days, 2d a day/night
- In 1629, Nicholas Birch and “his wif” (Jenet) were paid 7s for a week’s work in the Thieveley lead mines
- In April of 1759 on an unknown farm near Oxfordshire, Goody Currell was paid 4d for weeding 1 day
- In 1736, Ann Parry, “the Dumbwoman” was paid 2s at Henblas “for knitting stockings at the rate of a penny a day”
- Reeve’s draft accounts of the Wiltshire lands of Adam de Stratton record for 1275-6 “In stipendis famulorum—deye” 3s plus livery in mixed grains
- The “Drudge Maid” of Sir Thomas Puckering in 1620 was paid 15s per half year
- In 1640s Colonel Henry Bradshaw recorded paying his woman servant between £1 - £1 10s plus various gifts and perquisites in addition to her board
- In 1690-1 Sir Daniel Fleming paid Mary Hall his cook’s maid 11s twice a year and gave her new husband 1s in November 1691 when she apparently left his service
- In 1708, Grace Jefferson was paid for 11 months work at Blenheim when she “married away”
- In 1799, a new general servant was hired by Matthew Flinders, a surgeon, apothecary and man-midwife of Lincoln at £4 4s per annum

It will help in the subsequent analysis if we explain our interpretation of the nature of the differences between the two kinds of wages and the women who earned them. We understand daily and weekly payments as remuneration for casual work. This was sometimes for one-off employment as when Sir Thomas Aubrey in 1638 employed a large number of men and women “for the repairing of the sea banke” on his estate (Bowen, ed., 2006). Frequently, however such casual work involved extended employment as in the case of Avis Starling who (though with various spelling of her name) crops up regularly in the Earl of Bath’s household accounts in 1640-9 paid for washing clothes, cleaning the house and performing outdoor farm work (Gray, 1996). As the latter suggests, casual employment was not limited to agricultural tasks; women were employed by the week, day or half-day as garden labour, cleaners, scourers, laundresses, messengers, construction workers, and transport workers.

We associate casual employment with married women, since workers were often (though not always) described as such in the sources. Thus, a “uxor” was paid for preparing thatch for repairs at All Souls College, Oxford in 1456 (All Souls Domestic accounts); “John Wilson’s wife” was employed for 16 days in December 1698 “salveing and tobaccoing of sheep” according to the estate and household accounts of Sir Daniel Fleming (Tyson, ed., 2001); “Peter Hearder’s wife” worked for 10 days mowing in 1649, according to the household accounts of Henry fifth Earl of Bath (Gray, 1996); “Jenet the wiffe of Nic Birch” appears regularly in the accounts of the Thieveley Lead Mines, 1629-1635 (Sharp, ed., 1951) and, “Richerd Postilthwaitt wiff” in the castle household and demesne farm accounts at Millom in 1513-14 (Winchester, 1982). Many of these women accessed their employment through husbands, occasionally working alongside them in trades or crafts or recruited by them to work for the same employer. Single women may have been disadvantaged in access to working opportunities in early modern towns because the authorities considered service a

more suitable role, while wives also had access to husbands' smallholdings (Roberts, 2005; Whittle, 2005). In medieval and early modern England, marriage rather than excluding women from economic activity often actually provided them with the means to work productively.

Of course this was not always true; our own "mayds in the craine" sound like some of the many single women who also took up casual work. Medievalists in particular have been careful to point out that both older married and younger single women were involved in day labour, John Langdon, for example, illustrating this point with reference to an "ancilla" or maidservant paid 7½d for collecting moss for five days in 1293 (Langdon, 2011, p. 35). Nonetheless Langdon also finds many "mulieri", older and likely married women, in his "reserve workforce", and L.R. Poos, explicitly challenged the ahistorical assumption that day work was only undertaken by spinsters, widows or "other unencumbered with the domestic demands of married life or in economically precarious households" noting that a significant minority of female day labourers in his sample were explicitly referred to as wives (Poos 1991, p. 217). Our case is simply that married women were strongly represented among this group.

On the other hand, the bulk of wage observations relate to annual service. These should not be read as necessarily involving commitment to a specific employer. Many servants changed jobs annually and a significant number even within the year contrary to agreed terms, though some like Margaret Moorhouse, who served Sir Daniel Fleming in various domestic capacities from 1689 to 1696 and then "came again" for three further years in 1697, were long-term employees (Tyson, ed., 2001). Such stalwarts aside, annual service appears to have been dominated by young unmarried women, for living in as a farm or household

servant was difficult if not impossible to combine with marriage and a family (Whittle, 2005). Women were employed on an annual basis for outdoor agricultural work and as indoor domestics and indeed often appear to have performed both kinds of work on a regular basis.

Again, the mapping from type of contract to marital status is not infallible. Some married women (and certainly some widows and deserted wives) sought refuge as resident domestic or farm servants, but this was relatively uncommon given the logistic difficulties and resistance from employers towards encumbered staff (for a discussion of this point see, Whittle, 2005, pp. 97-98). Women generally left annual service on marriage as the cases of Mary Hall and Grace Jefferson cited above illustrate.

The next problem was to put casual rates and annual stipends on the same footing to enable comparison, which involved assumptions about the length of the work week. We opted for a five-day working week. With 52 weeks per year, this amounts to 260 annual work days, virtually matching the usual assumption of a pre-modern working year of 250 days (e.g. Allen and Weisdorf 2011). The few sources that specify the number of days worked per week, suggest that five or six days was the norm, depending on the season. While the assumption of a six-day working week would reduce imputed daily rates for women on annual contracts and change the relationship to casual rates, our conclusions remain robust.

A more challenging complication arises in that nearly all our stable (and a few of our casual) contracts came with payments in kind. Some (although very few) contracts entailed no cash payments, their holders entirely reliant on in kinds. In the medieval period, in-kind payments were allowances in mixed grains, although *famuli* (as the Lord's servants were called) often though not always resided in the manor and may also have enjoyed other

perquisites such as additional food, particularly at harvest time, and the use of manorial equipment and draft animals on their own smallholdings (Poos, 1991; Hilton, 1975; Hanawalt, 1986; Dyer, 1988, 1989). Wages which might be contracted for in cash were apparently also sometimes paid in food and clothing (Youngs, 1999); certainly advances against wages were common (e.g. Bird, ed., 2013; Wiltshire Record Office, 811/207). In the early modern period and on into the nineteenth century, most farm and household servants continued to live in and room and board was an essential part of the employment bargain.

**TABLE 2**  
ALLEN'S 'RESPECTABILITY' CONSUMPTION BASKET (FOR ONE ADULT PERSON)

Good	Quantities per Year	Calories per Day
Bread	234 kg	1571
Beans/peas	52 L	370
Meat	26 kg	178
Butter	5.2 kg	104
Cheese	5.2 kg	54
Eggs	52 each	11
Beer	182 L	212
Soap	2.6 kg	---
Linen	5 m	---
Candles	2.6 kg	---
Lamp oil	2.6 L	---
Fuel	5.0 M BTU	---
Rent	5% allowance	---
<b>Total</b>		<b>2500</b>

*Source: Allen, British Industrial Revolution, pp. 36-37.*

Ideally, such in-kind rewards should be valued in each and every case and added to cash payments to work out overall remuneration. Unfortunately the evidence needed to support such an exercise is rarely provided. An alternative way to 'monetize' in-kind payments is to assume that they covered a worker's subsistence and so can be valued via a historical consumer price index. Bob Allen's so-called 'respectability' consumption basket provides a tool for capturing and valuing the goods commonly consumed by an average person during the pre-modern era (Allen 2009). Table 2 lists the commodities included and their quantities, and the daily cost from 1264 to 1850 is provided on Allen's website.<sup>4</sup> The basket does not include housing costs, but Allen adds five per cent of overall costs to capture rent. We assume that in-kind benefits were equal to 100 per cent of the value of the basket even though women possibly ate fewer calories.

To turn the remuneration from an annual contract (the cash and the imputed values of the in-kind payments) into a day rate comparable to female casual day rates, we have done the following. First we estimate the value of the in-kind payments per year by multiplying the daily cost of Allen's baskets by 365 days. To that, we then add the cash wages recorded in our sources. Then, we divided that number by the assumed work year, i.e. the 260 days, to arrive at our day rate. Let us take the year 1600 as an example. We have two different sources for this year with two annual payments each. One source is the household papers of Henry Percy Ninth Earl of Northumberland, which records two women in receipt of annual stipends of £1 and £1 13s 4d (Batho, ed., 1962). The other source is the house and farm accounts of the Shuttleworths of Gawthorpe in which two women receive annual stipends of 15s and £1 6s 8d, respectively (Harland, ed., 1856-7). These payments may all have been at the high end of the distribution as Jacob Field finds some evidence that female domestics employed in gentry

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<sup>4</sup> Reproduced from Allen (2009); see Allen: <http://www.nuffield.ox.ac.uk/People/sites/Allen/SiteAssets/Lists/Biography%20Sections/EditForm/london.xls>.



or aristocratic households received superior wages (Field, 2013, p. 268). Our four women all lived in, which we assume meant they received board and lodging. The implied value of these in-kinds comes from multiplying the daily cost of Allen's consumption basket (2.42d for the year 1600) by 365 days. The monetary value of the in-kinds in 1600 was £3 13s 5d, considerably more than the cash wages. The total values of the cash wages and the imputed values of board and lodging were then £4 8s 5d, £4 13s 5d, £5 1d and £5 6s 9d, respectively. Spread out across 52 weeks of five working days each (i.e. 260 working days in total) we find our maids received daily rates of 4.08d, 4.31d, 4.62d, and 4.93d. This comes to an average of 4.49d, which can then be compared with the observed day rates of women for the same year.

Of course, it is possible that Allen's respectability basket misestimates the value of in-kind payments received in any particular case or worse still that trends in the value of the basket do not follow trends in the value of the perquisites attached to annual contracts. Occasionally in-kind benefits are described in sufficient detail to be able to calculate (or at least approximate) their absolute value and then compare this with our guesstimate based on Allen's basket. In the medieval period, when long-term contracts often included payments in grain, we use a procedure similar to that of Penn and Dyer (1990, p. 369). For example, Rogers's account of the standard perquisites of a dairy maid has her lose a quarter (grain measure equivalent to 8 bushels) of wheat every 14 weeks, which is 0.08 bushels of wheat in return for a day's food in the manor house at harvest (Rogers, 1866-1902). Around 1300, a bushel of wheat cost close 8d (Rogers, 1866-1902). So the 0.08 bushels of wheat were worth 0.64d. The cost of the basket in 1300 was 0.55d per day. So the value of the wheat was not too far from the board we estimate she received.

Similarly, on the manor of Cuxham, 1278-9, the dairymaid received a quarter of mixed grains every 14 weeks (i.e. 30 bushels per year) as well as 4 bushels of wheat and 4 bushels of barley but no meals at harvest time at the lord's table and no cash (Harvey, 1960). The mixed grains would probably have consisted mainly of inexpensive sorts, for example, one-third peas, one-third rye, and one-third oats. This means that the value (using prices from around 1300) of all her grains (10 bushels of peas at 4d/bushel; 10 bushels of rye at 5d/bushel; and 10 bushels of oats at 3d/bushel; plus 4 bushels of wheat at 8d/bushel; and 4 bushels of barley at 5d/bushel) would come to 13s 9d per year. Allen's basket cost 0.51d per day in 1278, or 15s 8d per year, this time slightly more but not completely adrift from the value of the in-kinds.

On rare occasions the sources themselves cost up room and board: for instance, on the Manor of Mote in 1474-5, Agnes atte Wode fell ill for a month and was lodged with another servant member of the household at a cost of 2s 8d (Gardiner and Whittick, eds., 2008). If we subtract from this charge the average monthly cash payment to women servants at the Mote, which was 16d, to pay for Agnes's nursing care, it leaves 16d to cover the old woman's board and lodging. The cost of Allen's basket in 1474-75 was 0.64d day or 19d for one month, once again not far from the allowance her employer made for Agnes's room and board.

In the late middle ages, when it became common for casual wage workers to demand food as well as cash (Richie, 1962, p. 97), careful stewards often accounted for the provisioning with an eye to working out the most cost effective bargain. Thus in 1588, 11 women employed to work the hemp at Gawthorpe and Smithils were paid 1d per day in cash but their "tablynge" cost 3d a person; subsequently 15 women who were employed on pulling flax were paid only (but very well) in terms of food and drink which cost somewhere

between 3d and 4d per person. The following year, 4 women who “did brake hemepe and swinglye” were paid 4d per day but with no food allowed and when we track the activity through to 1597 this generation of hemp workers were firmly “upon their hone table” (Harland, ed., 1856, p. 46, p. 61, p. 108). With a cash component of 1d per day with food, the in-kind compensation would have come to around 3d per day, not far off from the average cost of Allen’s basket in the 1590s of 2.3d per day.

Later, explicit references to board wages, that is wages paid when employers sought to retain servants’ services but had temporarily shut up a household within which they were not currently resident, provide further direct indication of the value of living-in. For example, in 1745 Lord Hatton’s Steward paid Hannah Hoycock and Ann Hawkins £4 9s each for 25 weeks and 3 days “bord and wages”, that is 6d a day (NRO, FH 291). However, we also know from earlier in the accounts that these women’s annual cash pay was £3 per annum i.e. 2d per day (with 260 days of work), implying that their board was valued at 4d per day. The daily cost of Allen’s basket that year was 3d.

Similarly, agricultural wage assessments are often given with and without meat and drink which indicates the value of diet. Thus the Assessment of Wages and other Regulations made by the Justices of the Peace for Buckinghamshire in 1561 posted the maximal rate for women “Rakers & Cockers & such lyke” at 2d with “meate & drinke” but 5d without (Tawney and Power, 1924; Evans, 1936; Thompson, 1904) which suggests that food and drink was expected to cost 3d per day. In 1561, the basket cost 1.5d per day, or about half of the cost implied in the difference between the assessment with tabling and the assessment without, a gap closed partially by the fact that the wage assessments were considered maxima, and partially by recognition that the food offered to workers in the harvest season was likely at

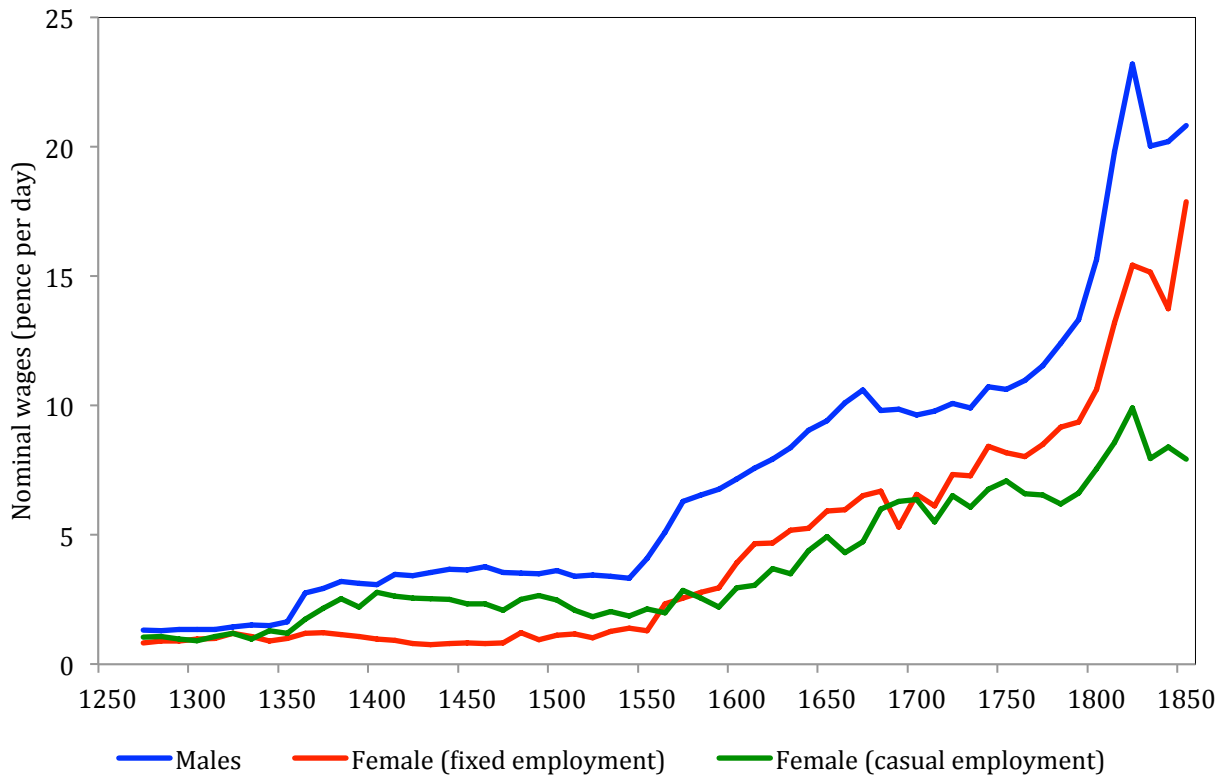
the apex of working-class consumption, in quantity and quality better than anything obtained in the rest of the year.

Turning to another kind of source: Chancellor's farm accounts for 1766-7 have the annual cost of housekeeping at £39 8s, and with five working residents (3 women and two men) this means board cost 5d per person per day (Munckton, ed., 1994). Allen's basket costs close to 4d per day at this time, again a slight underestimate of the actual value of the in-kinds, which were probably boosted here by the presence of the farm manager and his wife at table.

Overall our spot checks build confidence in our necessary approximation; though sometimes in the low end, we do not think that our valuations of the in-kind benefits associated with service contracts are misleading. In any case, the estimated daily costs of living simply capture the expenses that an average woman faced had she not been living in. The great benefit of our strategy is that it facilitates the separate computation of the daily remuneration in cash and kind for women working on a short term casual basis and those working on more service contracts, and so facilitates a comparative analysis as well as a first-round depiction of long run trends in women's wages.

**FIGURE 3**

THE DAILY WAGES IN PENCE OF UNSKILLED MEN AND WOMEN (BY DECADE)



*Note:* The figure shows the nominal day rates of men and women by decade from 1260-70 to 1840-50. Women's remunerations are divided into those paid for casual employment and those paid for annual employment (see text). Annual and weekly payments are turned into day rates on the assumption of a five-day work week (totalling 260 working days per year). In those (very rare) decades with no observations (see Table A1) the gaps were closed using linear interpolation. *Sources:* Female unskilled wages: see text. Male unskilled wages: Clark (2007).

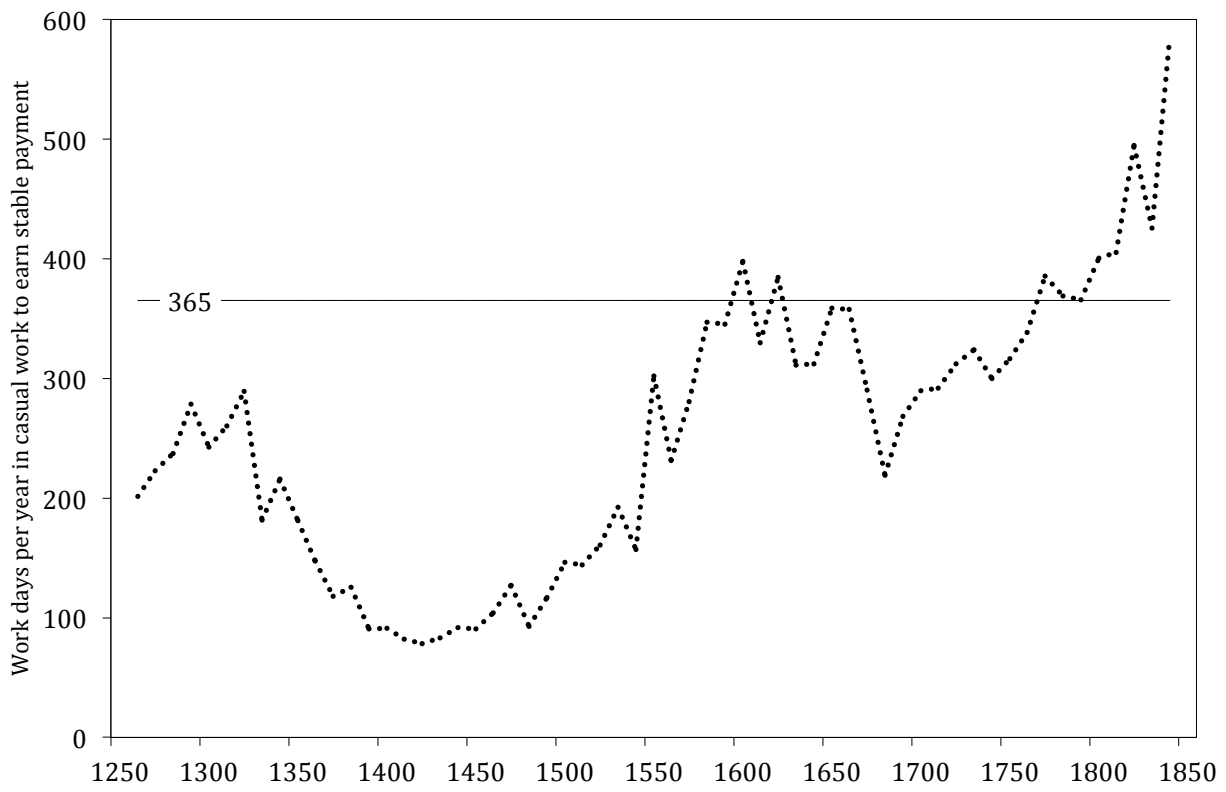
Figure 3 presents our main findings in terms of the evolution of both types of female wages. Clark's series for male farm labourers' wages is shown alongside, and when compared with women's day rates, illustrates trends in the gender gap. Unfortunately our series for female servants has no direct male comparator since there is no series for male farm and domestic servant on annual contracts. All wages (decadal averages) are reported in Table A1 in the appendix. Figure 3 shows women's daily remuneration from annual contracts remains roughly constant from 1300 to 1500. There is some modest evidence of improvement in the immediate aftermath of the Black Death but this is neither sustained nor significantly

different from certain pre-plague years. Indeed, in well documented cases such as Cuxham in Oxfordshire, remuneration returned to pre-1349 levels by 1353 (Harvey, 1960, 1976). Women's casual daily rates, on the other hand, are clearly boosted by the labour scarcity that followed the Black Death, and indeed track the trend in male rates all the way up until the late fifteenth century. The gap between the daily wages implicit in annual service contracts and those earned casually persists until around 1550.

Figure 4 offers a different way of thinking about this, illustrating the working year in casual employment needed to earn the income from stable work, and how this working year increased steeply over the course of the sixteenth century as the returns to longer-term contracts began to increase and converge on casual earnings. The illustration of our methodology sees this trend in progress, for we can compare the daily rates we imputed from the annual cash payments and valuation of in-kinds enjoyed by Sir Henry Percy and the Shuttleworths' contracted servants, who remember probably benefitted from working in high-status households, with a daily wage rate for 1600. We could infer this from a sermon delivered by Thomas Carew, the well-informed puritan rector of Bildeston, who claimed that the women who prepared wool and spun yarn, earned only 3d or 4d per day without food, less he believed than was paid to women who made hay, reaped grain, or carried ale (quoted in McIntosh, 2013). Carew's estimate of this range of daily earnings from different kinds of casual labour is admittedly hearsay, but supported by other observations of day rates for this exact year from the Grassmen's Accounts of St Giles Durham (Barmby, ed., 1896) and (again) the house and farm accounts of the Shuttleworths of Gawthorpe (Harland, ed., 1856), which added together yield a mean of only 3.25p, less than the mean value of the four imputed day rates for the annual servants of Henry Percy and Shuttleworths, at 4.49d. Of course, the day rate for men remained well above even the latter figure at 8d.

**FIGURE 4**

THE CASUAL WORKING YEAR NEEDED TO EARN THE ANNUAL CONTRACT INCOME (BY DECADE)



*Note:* The graphs shows the number of days of work required in casual employment to earn the annual income in stable employment. *Sources:* Female wages: see text.

For periods in the 1600s, in contrast to the medieval era, annual service contracts might have been more rewarding than casual work, and although casual remuneration made a comeback in the late seventeenth century (relative to stable payments but also in absolute terms) this was not sustained and annual contracts became consistently better paid from the early 1700s against the backdrop of the industrial revolution. Figure 4 captures this well, showing that after 1550 women earning casual rates almost always had to work more than 260 days to keep up with stable payments and, indeed, sometimes would have had to work more days than there are in the year! The next two sections of the paper tease out the implications of our findings for two important debates in economic history, beginning with the legacy of the Black Death.

### III

#### **The Black Death, the European Marriage Pattern and Western Economic Growth**

Medievalists have debated the extent to which women shared in the “golden age of the English peasantry” that followed the Black Death. The plague killed between 30 and 45 per cent of the population in its initial visitation and recurrences meant that by the 1370s the population had been halved. Recovery was slow. The silver lining, for the peasantry at least, was the dramatic increase in workers’ remuneration, especially (but not only) in agriculture as landowners struggled to recruit and retain labourers. The results are apparent in the rapid increase in men’s day (nominal and real) wages circa 1349 (see figures 1 and 3). Some historians have argued that women’s gains were even more marked as they could find employment in jobs which had earlier been the preserve of men, migrate to towns to work in the growing textile industries or commercial service sectors, or become members of an expanding class of household servants and so enjoy “a high degree of economic independence” (Goldberg, 1986; 1992). Others however have suggested that whatever the implications of the Black Death for male workers, the rigid grip of the sexual division of labour prevented women from seizing or consolidating the opportunities created by the labour shortage. “[W]omen tended to work in low-skilled, low-paid jobs... This was true in 1300 and it remained true in 1700” (Bennett, 1988, p. 278; 1996; Mate, 1998). The debate has devolved into an argument about the continuities of gender subordination even in a world where labour was at a premium with feminist historians arguing for the “triumph of patriarchal structures ... over demographic crisis” and their opponents contending that “a situation where women’s labour was both excessively cheap and reluctantly and sparingly used by farmers, is hard to sustain” (Bardsley, 2000, p.29, 2001; Hatcher, 2001, p. 195; see also, Langdon, 2011).



The findings we bring new to this debate concern the different trends in casual and service wages. These support, indeed quantify, the claim by both contemporaries and labour historians that workers in the late middle ages preferred employment on a daily or weekly basis because it offered the possibility of higher returns and more leisure (Bailey, 1994, p. 162; Dyer, 1980, pp. 367-9; Kenyon, 1962; McIntosh, 1986; Poos, 1991, pp. 218-20). Our evidence suggests that women in particular lost out by annual service contracts. Drilling down into the data, Deborah Youngs has shown that on the late medieval demesne of Newton Cheshire, although male and female workers were both employed on long term contracts, women appear to have been more dissatisfied by the terms and conditions offered; they were less likely to renew after a year, and more likely to leave early (Youngs, 1999, p. 149). Examples of women's anticipated or actual dissatisfaction with the returns to annual service contracts and employers' recognition of this are evident in many of the sources, which depict the latter seeking to reward maidservants for working to term and the former quitting prematurely nonetheless.

Given the apparent disadvantages associated with annual service contracts and the auxiliary evidence of women's discontent with them, why did the gap between casual and annual rates persist for centuries? Why didn't women reject the longer term contracts with higher frequency and arbitrage the labour market into convergence? One important reason is that annual contracts carried with them security of employment. If women were unsure of sufficient casual work for their support, they would be prepared to accept the drawbacks of annual service. Undoubtedly this was partially the case but consider how many days work would have been needed at casual rates to match the annual pay (including in-kinds) on service contracts: in the medieval period, working half the year was usually more than enough! Certainly in cash terms it would seemingly not have taken many weeks' work at the

rates prevailing in the late fourteenth and fifteenth centuries to accumulate as much as many servants earned in an entire year (Ritchie, 1962, p. 93; Dyer, 1998, pp.222-5). Many young and healthy women might be persuaded that harvest, haymaking, and other seasonal demands for agricultural work along with occasional labouring jobs and opportunities in cloth production and subsistence agriculture would see them through.

On the other hand, reflections on the demand for labour have raised doubts about whether there was enough employment throughout the calendar year to match servants' earnings in cash and kind. Poos found women at Porter's Hall on average worked only 6.5 days, earning just 13.1d (Poos, 1991, p. 219) and Langdon is similarly pessimistic about opportunities in Woodstock (Langdon, 2011). However, these figures relate to a single employer/place and so may well underestimate the work available to more enterprising and mobile women. Although Hatcher (2011) has sought to generalise the argument that casual work was only irregularly available, in a context where women provided about a third of all days worked (Broadberry, et. al. 2011), some would surely have seized the more rewarding option.

A second answer has to reach beyond a model of the labour market that features rational and mobile workers. This answer invokes the legal response to the Black Death in the form of the provisions of the Ordinance and Statute of Labourers. Most economic historians are agreed that the surviving labourers and artificers were not slow to take advantage of their post-plague scarcity by demanding more wages and higher profits for their crafts and wares (Putnam, 1939; but see also Cohen, 2007). Bertha Putnam, in her classic account, while acknowledging the likely hyperbole of the chroniclers agreed that the "malice of servants' appeared to employers the only appropriate phrase to describe the attitude of the labouring

classes" (1908, pp. 91-2). However, the reason we know about the peasantry's hardball is because the state too was in reaction to the labour shortage. In England, as elsewhere, the ruling class's response to the sudden increase in the peasantry's power was a mix of concession and repression, with the latter exemplified by legislation to hold wages and prices down to levels prevailing before the Black Death, thereby to prevent peasants and craftsmen from exploiting their scarcity. Thus on the manor of Cuxham response to the dislocation of 1349 involved additional payments of 1s to the famuli "to do the lord's business the better" but then putting up stocks within which to punish recalcitrant workers as required by the Ordinance and Statute of Labourers (Harvey, 1960, p. 89). Two hundred years later, the Shuttleworths of Gawthorpe were contributing to the fabrication of a new "cook-stole and whipp-stock" (Harland, ed., 1856, p. 246). The proceedings before Justices of Labourers and Quarter Sessions of Justices of the Peace with their long lists of labour offences testify to the intensity of this phase of the class struggle (Putnam, 1908; Putnam, 1939; Sillem, 1937; Kimball, 1939; Thompson, 1904; Penn, 1987; Penn and Dyer, 1990).

While the extent to which the legislation was enforced remains debatable, its intentions were clear. First, all able-bodied men and women, free and bond, without definite means of support, were commanded to accept service at the rate of wages that had existed before the Black Death or even five or six years previously: the compulsory service clause. Second, reapers, mowers, and other workmen or servants were forbidden to leave their masters within the term of their contracts, without reasonable cause or permission, and other masters were forbidden to eloin workers or employ runaways: the contract clause. Third, nobody was permitted to give or receive higher wages than were customary: the wages clause (Putnam, 1908). Thus the provisions "stand out lucidly" (Putnam, 1908, p.71). They were intended to prevent workers from exploiting labour scarcity and in particular holding up

employers at key moments in the agricultural crop cycle. For our purposes what is important is that the provisions applied to women as well as men, that agricultural labourers were described by their occupations and their maximum legal wage specified, and that the contract of service was to be by the year or other usual term and never by the day (Putnam, 1908; Richie, 1962). Service in summer was to be in the same place as in winter with the exception of labourers in certain districts in harvest time.

Even if these regulations were poorly enforced, they raised the costs of mobility and involved risks for recalcitrant workers, some of whom were whipped, humiliated in the stocks, returned to vindictive masters and perhaps ultimately cowed. Among those falling foul of the Statutes were many women. Putnam herself references penalties imposed on women who had gone in groups to another town in the autumn even though suitable service had been offered to them in their native place, or had reneged on a contract made with an employer, or had to be delivered back to masters to serve out their term at the command of the Justices (Putnam, 1908, p. 198, p. 192, p. 214). In the lists of offenders against the Statute in Wiltshire in 1349, women loom large, singled out for harsh treatment (Thompson, 1904). More recently Simon Penn has concluded that in both the proceedings before the Justices of Labourers and those before the County Quarter Sessions “women appear, often in substantial numbers, among those indicted” (Penn, 1987, p. 3). Significantly one half of those described as common labourers were women. Moreover, Poos (1991) provides examples of the Statutes brought to bear on a newly mobile female harvest workforce, penalized not just for taking excess wages but explicitly for moving from place to place. It is of course possible that presentments were selective and reflected the belief that wage demands by women were particularly offensive. On the other hand, it may be that indictments underestimate female offences because women workers were considered less important. Moreover, it is hard to interpret women’s strong

representation among the resistance. Does it suggest that they were particularly restive or that they were selected for oppression? What is clear is that the regulations must have to some extent infringed women's geographical and occupational immobility, inhibited their working casually by the day, pressed them into annual service, and so prevented the convergence of wages that this would imply.

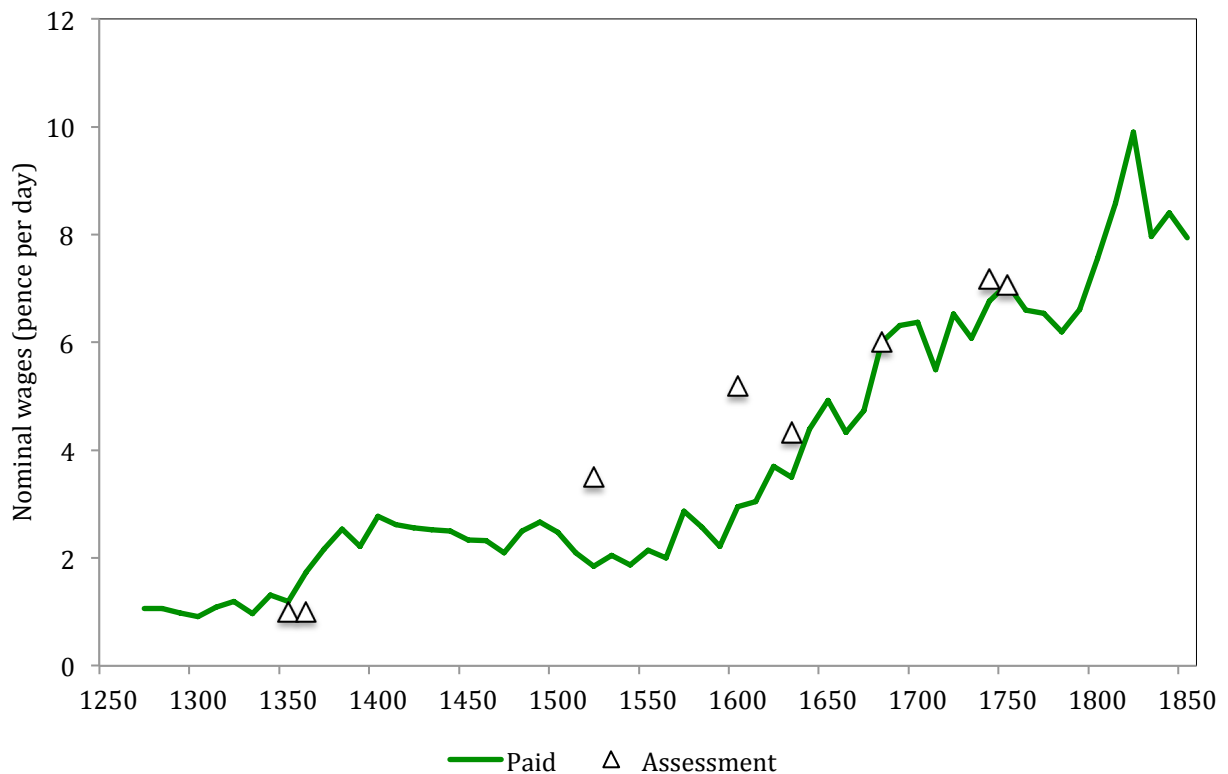
The Statute created a precedent and set the law in motion towards both the Elizabethan Statute of Artificers which also sought to impose maximum wages and restrict workers freedom of movement and the poor law which distinguished between the able bodied and those who could not work and through settlement sought to penalise mobility. Both developments also adversely impacted on women as the long lists of women removed, whipped or imprisoned for vagrancy under the Tudor legislation suggest (for example, see Anderson, 1931).

These ideas are speculative and further work is needed on the gender implications of the labour regulations. However support is forthcoming from economic historians who have seen the early modern period as an era of increasing suspicion of masterless persons, with unmarried women working and living on their own the most mistrusted (Wiesner, 1993, p. 99; see also Goldberg, 1986, p. 20). Women who migrated to cities in search of employment were particularly distrusted, for any woman travelling alone was suspected of immorality. Wiesner notes that in 1659, for example, the city of Dublin ordered that "a large cage [be] set up in the corn market to imprison all beggars, idle women and maids selling apples and oranges" (1993, p. 89). Roberts, as noted above, suggests that single women seeking independent work were viewed with alarm in towns "whose authorities assumed the only suitable 'place' for such a woman was as a servant" (2005, p. 247). Women working alone in a

trade were viewed as presenting unwarranted competition for householders with children to support (Froide, 1999, pp. 249-50). Authorities' coercion of those 'out of service' back into subordinate employment aimed to maintain social order and keep wage levels down. Almost all the people prosecuted in Norwich before 1632 for living 'at their own hand', that is not as servants, were women, feared particularly because they had "not any man to control them" (Roberts, 2005, p.248; Griffiths, 1996, p. 356-8).

**FIGURE 5**

WOMEN'S UNSKILLED CASUAL WAGES AND DAY WAGE ASSESSMENTS (BY DECADE)



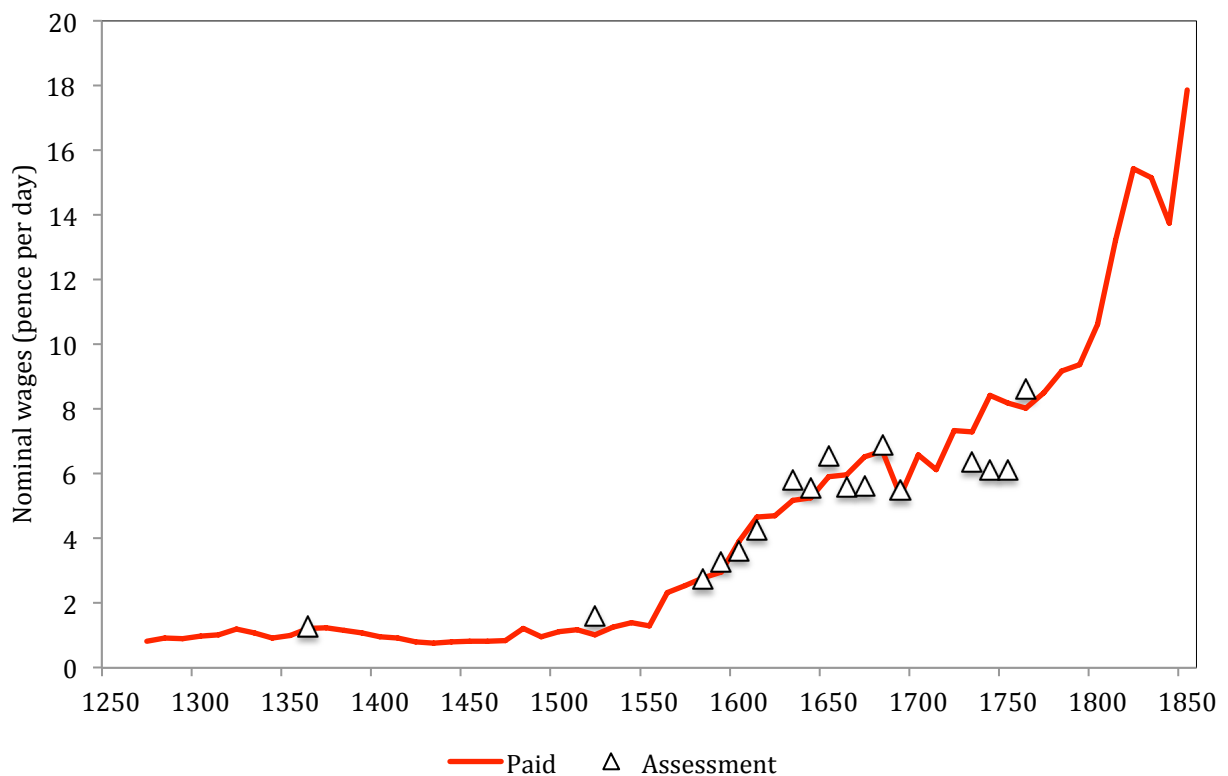
Sources: Paid wages: see text. Assessment wages: see bibliography.

Figure 5 compares wage assessments with our casual wages and shows that while in the immediate aftermath of the Black Death legal prescriptions could not stand against the dramatic realities of a labour market denuded of half the usual workers, thereafter, and even

excluding harvest wages, the main concern of the Justices, on a daily basis women rarely earned at the assessed level. In contrast, figure 6 suggests that in the medieval period remuneration from longer term contracts appears to have been held down by the legal ceiling, and although JPs adjusted the annual wages of women servants upwards in line with prices after 1560, the assessments appear to have acted as a drag on wage growth until around 1700 (for a supporting view see, Roberts, 1981).

**FIGURE 6**

WOMEN'S UNSKILLED ANNUAL WAGES AND ANNUAL WAGE ASSESSMENTS (BY DECADE)



Sources: Paid wages: see text. Assessment wages: see bibliography.

Our decomposition of female wages into those earned casually, which included many married women, and those earned on annual contracts, by and large by younger unmarried women, has powerful implications for theories that see western European economic

acceleration as the product of the *European Marriage Pattern* (EMP), itself founded on the gendered legacy of the Black Death. The logic of these theories is unassailable. As De Moor and van Zanden see it “a strong increase in real earnings especially for women ... accelerated the general adoption of the EMP... particularly among servants” (2010, p. 11). Women’s improved position in the post-plague labour market and especially the growth of opportunities as servants in husbandry linked to the relative expansion of “horn” (in which women had a comparative advantage) versus “grain” (in which they did not) allegedly pushed up female wages and labour force participation. In Voigtländer and Voth's version fertility restriction emerged as an indirect consequence of the abundance of land after 1348–1350. The Black Death “raises land-labor ratios and thus wages ... raising female employment opportunities outside the peasant household ... increased the average age at first marriage for women, reducing fertility rates. This in turn lowered population pressure in a Malthusian setting and helped to keep wages high ...”(Voigtländer and Voth 2013, p. 2229, p. 2260). However attractive these historical hypotheses, they lack empirical foundation. Our unpacking of the wage trajectories, while consistent with medievalists’ accounts of workers’ preferences for daily work and gender historians’ recognition that women workers faced increasing difficulties in the 1400s, offers little support for these models. Women’s gains in the post Black Death labour market were subdued as far as annual service is concerned. Here, wages held down by an institutional heavy hand and maybe outside the towns by insufficient work, offered little in the way of inducement to remain independent, postpone marriage and so reduce fertility. Ironically, the patterns in our wages suggest the opposite: it was *married* women who gained to the extent that they were able often through their husbands to access better-paid casual labour and share in the boost that demographic collapse gave to men’s remuneration and family incomes. This view appears consistent with the fragmentary evidence we have on age at marriage in the late medieval period; Goldberg, for example,



suggests that for women in towns, an independent living was “harder to find and more precarious as the fifteenth century drew to a close” and as a result he speculates that they may have married *earlier* (Goldberg, 1986, p. 20). As for women in the countryside, where contrary to the contention of Voigtländer and Voth, production sometimes became less labour-intensive, their situation had always been less rosy. In short, the empirical record is more consistent with this less optimistic account of the gendered legacy of the Black Death and offers little in support of an English version of a ‘girl-powered’ economic breakthrough.

#### IV

#### **The Era of Industrialization**

Whether or not women benefitted from the industrial revolution is a question that has attracted even more attention than has the legacy of the Black Death. Optimists have argued that industrialization in both its protoindustrial and its factory phase, benefitted women, providing them with new opportunities and higher paid work (Pinchbeck, 1930; McKendrick, 1974); indeed this view lies at the core of Jan de Vries influential account of an ‘industrious revolution’ as the precursor of industrialization proper (De Vries, 2008). In contrast, pessimists have argued that industrialization by taking work out of the home into formalized and centralized workplaces disadvantaged women who became less able to support themselves and more dependent on men and male wages (Horrell and Humphries, 1995). Some historians draw the line at domestic manufacturing: outworking promoted women’s independence and wellbeing; formalized industry disadvantaged them (Berg and Hudson, 1992; Berg, 1993). Another distinction is between married women who could not adapt to regular hours and centralized workplaces and unmarried women who were much less constrained, though here again the causes and timing of changes in behaviour are debated (Burnette, 2008; Sharpe, 1998; Verdon, 2002, Shaw-Taylor, 2007).

Pinchbeck's classic (1930) work also precipitated a discussion of the extent to which the capitalist development of English agriculture displaced women workers and whether this was interrupted in the late 1700s and early 1800s by added-worker effects prompted by inadequate male wages, enlistment in the French wars and changes in the generosity of poor relief (Horrell and Humphries, 1995; Burnette, 1999, 2004, Verdon, 2002). Even if there were short run interruptions, the long run decline in women's opportunities seems incontrovertible with women fieldworkers working less than half the year by the mid-eighteenth century (Burnette, 2007). While much debate has revolved around patterns in participation rates (see Goose, 2007), wages, the gender division of labour, the extent of male breadwinning, trade unions, protective labour legislation and patriarchal ideology have also attracted attention. What light can our new empirical evidence cast on these debates?

Most recently, Robert Allen has extended his 'High Wage Economy' explanation of the industrial revolution to include women and children (Allen, 2014). Women's wages are particularly moot for Allen argues explicitly that it was the high cost of spun yarn, in turn a product of high spinners' wages, that made the spinning jenny a profitable investment and so precipitated the macro inventions in textile machinery (Allen, 2012). While our series, excludes spinners' wages as their computation on comparable terms raises specific problems, the ubiquity of hand spinning and its relatively unskilled nature implies that the daily rewards from hand spinning should move in line with casual wages. Can we find evidence of a spinners' high wage economy in our evidence? Reciprocally can we find evidence of the collapse in wages when hand spinning came into competition with machines from 1760 onwards?

Moving forward in time, the expansion of the factory system created new jobs for women workers. Even if machine spinning eventually became a man's job when the heavier mules were introduced, women and children dominated the early factory workforce. According to Chapman "[T]he cotton mills of the Arkwright era typically employed about 200 to 250 people, mostly unskilled juveniles and females who proved easy to train and manage" (1970, p.viii; see also Minoletti, 2011). Such work did however require commitment and regularity and is perhaps best understood as competitive with annual service, especially as some evidence suggests that younger unmarried women became a particularly important component of the workforce as the nineteenth century wore on. Again is there evidence that such new opportunities were driving up women's wages in annual employment at the end of our time period? In particular, how does our annual wage series compare with wages that were available for women spinning on jennies in workshops in the late 1700s or employed in the new Arkwright-type mills in the early nineteenth century?

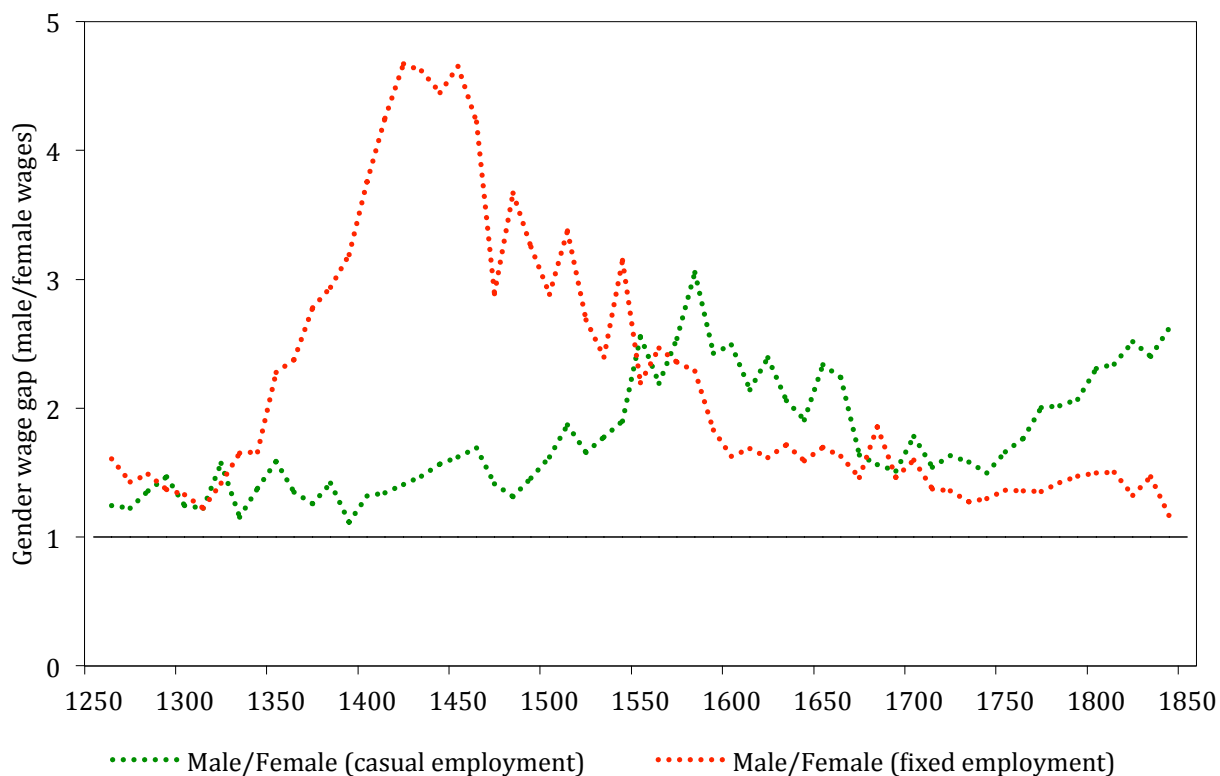
After 1550, although both casual and annual wages for women increased, their trajectories relative both to each other and to the wages of unskilled men diverged. Women's casual rates, which had tracked men's wages in the Middle Ages, fell away, creating a widening gender gap after 1500 and, although there was some recovery in the seventeenth century, there was a further relative decline after 1750 which appears sustained (see figure 7). These findings are consistent with an account that emphasizes the secular decline in opportunities for women in agriculture, relieved to some extent by protoindustrial development, particularly in the seventeenth and early eighteenth centuries, but relative to their male peers, women's casual wages appear adrift from a *High Wage Economy*. The widening gender gap from around the 1760s coincides neatly with the onset of competition from spinning machinery and the catastrophic fall in spinners' potential earnings (Eden,

1797; Valenze, 1995; Muldrew, 2012). Is this seen too in comparisons of our nominal wages with commentators' estimates of spinners' potential remuneration? Our mean wage for 1780-1790, 6.61d is close to the 6¼d that Arthur Young suggested was typical for women spinning wool in the late 1780s (Young, 1950, p.311). At this point the wool trade was in depression, exacerbated by the displacement of cotton spinners already affected by mechanization into wool and wages had been falling. Allen suggests that earlier in the century, spinners were able to earn as much as 8-10d though for a 10 to 12 hour day (Allen, 2012). His sources are more circumspect and wary of regional variations, differences by types of fibre and periods of slack trade (Pinchbeck, 1981, p.138, p.142; see also Sharpe, 1996, pp. 30-37). Arthur Young said that women cotton spinners around Manchester in 1770 earned a more modest between 2s and 5s per week (1771, Vol. III, p. 192), figures more congruent with our nominal wages around this time. Moreover, these good times, associated with the demand for cotton yarn only began in the second quarter of the eighteenth century and soon after 1770 were superseded by the inventions, while woollen spinners in the seventeenth century appear for the most part to have been badly paid (see above, p.23; Clark, 1919, p. 95). Perhaps any high wage economy for women working casually, underpinned by spinners' potential earnings, was as Pinchbeck suggests "not of long duration" (Pinchbeck, 1981, p. 140).

Given our association of casual work with married women's employment, this interpretation chimes with accounts which emphasize the narrowing of opportunities for wives and mothers to contribute to the family incomes of labouring men and the dreary development of a male breadwinner family structure in the absence of sufficiently high men's wages (Horrell and Humphries, 1995). The widening gap shown in figure 7 between the wages of male farm labourers and those of women casually employed sends a clear signal: married women and their children became increasingly dependent on husbands and fathers,

who as Francis Moore wrote in 1773 “alone must wield the labouring oar” (quoted in Pinchbeck, 1981, p. 141).

**FIGURE 7**  
THE GENDER WAGE GAPS OF UNSKILLED WORKERS (BY DECADE)



*Note:* The gender wage gap is the male wage rate divided by the female wage rate. *Sources:* Female wages: see text. Male wages: Clark (2007).

On the other hand, women’s remuneration from annual contracts, flat for most of the medieval period, improved dramatically (figure 4). Although comparison with Clark’s series for male day labourers is tendentious, in the absence of any series for men servants it is used in figure 7 to provide a relative perspective. In comparison with the huge wage gap characteristic of the middle ages, the early modern and early industrial eras saw greater equality. For women able to accept annual contracts, young unmarried women, the late eighteenth and early nineteenth centuries appear to have afforded opportunities, or at least

their wages stayed in touch with those of their unskilled male counterparts, underpinned by the rates available in the emerging factories and centralised workplaces of industrializing Britain. In nominal terms, by the end of our period, our daily earnings on long-term contracts are in line with the 19p or 15p per day which cotton or woollen factory workers could expect,(Pinchbeck, 1981, p.p. 190-4), and although other textile factory workers did not fare so well it is clear that the new opportunities kept wages ahead of living costs. Domestic servants whose wages had been stable for decades (Wark, 1997; Field, 2013) started to see an improvement as demand and supply exercised their inexorable power in a labour market increasingly released from the shackles of law and convention. Perhaps women even began to demand recompense for the loss of liberty implicit in residential service, reversing the old differential whereby secure employment and a place to live had apparently offset relatively low cash wages.

## **V Conclusion**

The main contribution of this paper is our wage series for unskilled English women workers from 1260 to 1850. Our determination to impute values for the perquisites associated with annual service contracts has paid dividends by enabling a comparison of the value of stable work, by and large the preserve of single and often young women, with the remuneration from casual employment often done by married women and accessed through their husbands. This comparison has provided fresh and important insight into the female labour market in the distant past.

The two series exhibit secular differences in levels and trends, which help answer some outstanding questions in British economic history. The series suggests that while women who had access to the casual labour market did share in the post plague “golden age” with their

male counterparts, women who worked on annual contracts did not. There is little evidence here to support the view that the late medieval and early early modern eras provided new opportunities for young unmarried women workers tempting them to delay marriage and reduce fertility, with the resulting *European Marriage Pattern* raising incomes and promoting further growth. If the Black Death did create the west via the European Marriage Pattern it is not reflected in the relative wages of female servants where logic suggests it should have left a record.

The series also casts light on the long-running debate about the effects of industrialization on women's economic opportunities and wellbeing as well as the more recent claims about women's participation in an eighteenth-century *High Wage Economy*. Although there is some evidence for relative improvement in women's casual wages in the late seventeenth and early eighteenth centuries, perhaps underpinned by protoindustrial development generally and opportunities in spinning in particular, this was only a temporary interruption to longer run decline. The failure of the casual female labour market to keep up with male wages or the cost of living suggests that for those women who were unable to commit to full time annual work, industrialization offered few gains. Married women and their children were likely increasingly dependent on men. In contrast, women who were able to commit to long hours of continuous work outside the home either as farm or domestic servants or later on as workers in workshops or factories saw their relative position improve. It was largely then single women free from family responsibilities who could profit from the momentous economic changes of the era of industrialization.

## Appendix

**TABLE A1**  
THE WAGES IN PENCE PER DAY OF UNSKILLED MEN AND WOMEN (BY DECADE)

In pence Years (decades)	Men Casual Mean	Women Casual Mean	Women Casual Sd	Women Casual N	Women Annual Mean	Women Annual Sd	Women Annual N	Basket CPI Mean
1260-1270	1.32	1.06	0.09	14	0.82	0.02	12	0.50
1270-1280	1.30	1.06	0.42	8	0.91	0.04	11	0.52
1280-1290	1.34	0.98	0.11	15	0.90	0.10	3	0.50
1290-1300	1.34	0.91	0.18	17	0.98	0.06	10	0.54
1300-1310	1.35	1.08	0.20	13	1.01	0.10	10	0.56
1310-1320	1.46	1.19	0.35	10	1.19	0.24	10	0.68
1320-1330	1.53	0.97	0.25	23	1.08	0.15	12	0.61
1330-1340	1.51	1.31	0.23	20	0.91	0.12	13	0.52
1340-1350	1.65	1.20	0.50	26	0.99	0.13	31	0.54
1350-1360	2.75	1.74	0.42	32	1.21	0.27	22	0.65
1360-1370	2.92	2.17	0.80	9	1.23	0.16	4	0.71
1370-1380	3.20	2.53	0.86	11	1.15	.	0	0.63
1380-1390	3.14	2.21	0.57	14	1.07	0.10	8	0.60
1390-1400	3.09	2.77	0.69	10	0.97	0.27	6	0.59
1400-1410	3.47	2.62	0.63	13	0.92	0.20	64	0.62
1410-1420	3.43	2.56	0.15	28	0.81	0.20	35	0.64
1420-1430	3.56	2.53	.	0	0.76	0.15	32	0.62
1430-1440	3.68	2.50	0.00	1	0.80	0.15	30	0.69
1440-1450	3.65	2.33	0.47	5	0.82	0.15	30	0.63
1450-1460	3.78	2.33	0.26	12	0.81	0.20	43	0.62
1460-1470	3.54	2.09	0.16	6	0.84	0.22	29	0.62
1470-1480	3.53	2.50	0.00	2	1.22	0.36	66	0.62
1480-1490	3.49	2.66	0.00	1	0.95	0.31	37	0.66
1490-1500	3.62	2.48	0.45	15	1.11	0.30	90	0.62
1500-1510	3.41	2.10	0.32	10	1.18	0.37	146	0.65
1510-1520	3.45	1.84	0.35	34	1.02	0.55	54	0.67
1520-1530	3.40	2.05	0.37	25	1.26	0.28	16	0.72
1530-1540	3.32	1.87	0.43	26	1.39	0.41	33	0.74
1540-1550	4.09	2.15	0.47	18	1.30	0.53	6	0.94
1550-1560	5.12	2.00	0.00	8	2.33	0.00	1	1.33
1560-1570	6.29	2.86	0.55	99	2.55	0.50	34	1.43
1570-1580	6.54	2.57	0.74	17	2.77	0.53	37	1.54
1580-1590	6.77	2.22	1.09	73	2.96	0.70	33	1.69
1590-1600	7.17	2.95	1.28	40	3.92	1.86	24	2.28
1600-1610	7.59	3.05	0.96	40	4.66	0.80	37	2.17
1610-1620	7.93	3.70	0.98	66	4.70	1.63	37	2.46



*Table A1  
cont'd*

1620-1630	8.37	3.50	1.46	31	5.18	2.12	60	2.76
1630-1640	9.03	4.39	1.01	47	5.26	1.60	77	2.94
1640-1650	9.41	4.92	1.54	121	5.92	2.13	70	3.42
1650-1660	10.10	4.32	0.91	13	5.96	1.24	60	3.00
1660-1670	10.60	4.73	0.64	32	6.51	0.80	30	2.94
1670-1680	9.81	6.00	0.00	10	6.70	0.29	3	3.14
1680-1690	9.85	6.31	0.75	13	5.31	0.37	24	2.84
1690-1700	9.63	6.37	1.43	137	6.58	1.15	65	3.31
1700-1710	9.78	5.50	1.29	177	6.12	1.84	22	2.94
1710-1720	10.08	6.53	1.15	14	7.33	1.63	52	2.89
1720-1730	9.90	6.07	1.23	14	7.29	1.49	99	2.90
1730-1740	10.72	6.76	0.00	1	8.42	1.81	224	2.90
1740-1750	10.63	7.09	2.17	54	8.18	1.77	281	2.84
1750-1760	10.97	6.60	2.02	60	8.04	1.36	208	3.07
1760-1770	11.55	6.54	1.47	40	8.51	1.86	202	3.31
1770-1780	12.41	6.19	1.45	80	9.18	1.57	207	3.74
1780-1790	13.33	6.61	1.21	36	9.37	1.71	194	3.63
1790-1800	15.65	7.55	2.11	71	10.62	1.93	203	4.61
1800-1810	19.80	8.58	1.82	38	13.21	1.51	177	5.92
1810-1820	23.19	9.90	1.93	33	15.43	3.06	133	6.46
1820-1830	20.04	7.96	1.58	30	15.15	3.77	206	4.98
1830-1840	20.20	8.40	1.66	35	13.75	3.53	146	4.83
1840-1850	20.82	7.94	1.33	26	17.87	1.58	46	4.93
Mean/sum	7.20	3.79	0.79	1874	4.40	0.90	3855	1.96

*Note:* In those (rare) decades with no observations the gaps were closed using linear interpolation (wages in italic). Annual and weekly payments are turned into day rates on the assumption of a five-day work week (amounting to 260 working days per year). *Sources:* Female wages: see text. Male wages: Clark (2007). Cost of consumption basket (CPI): Allen (*Link*).

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