

Can Economic Decline Lead to More Secure Employment in the Absence of Internal Labor Markets? The case of Norfolk farm workers in the late nineteenth and early twentieth century England. □

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Abstract: This paper employs two different types of sources in order to examine the stability and career elements of farm work in the county of Norfolk, one of the prime areas of arable agriculture in late nineteenth and early twentieth century England. First, a set of farm workers for whom marriage registers have been linked to census records is employed in order to examine the extent of occupational continuity between marriage and census reporting date as well as between father and son along with the extent of migration. This evidence indicates substantial amounts of continuity and mobility both for occupation and for geographical location. Second, a set of weekly farm labor accounts for a farm in Norfolk is employed to examine the extent and nature of worker tenure and turnover on the farm.

This evidence indicates that in the mid-nineteenth century there was substantial weekly turnover of the farm's workforce. However, some workers maintained a longer-term attachment to the farm even though employed irregularly on it. However, by the middle of World War I, it appears that the farm's workforce had far more regular employment throughout the agricultural year; this stability seems to have been maintained through the mid-1930's. The case considered here suggests the possibility that agricultural labor markets could develop patterns of regular employment even in the absence of a multi-division organization.

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Observers of U.S. labor markets in the 1980's and 1990's have suggested that there has been a decline in job stability due to a diminishing role of internal labor markets in firms as they have down-sized, sub-contracted, and otherwise restructured to facilitate more flexibility (see Bernhardt and Marcotte 2000). Observers have depicted the U.S. labor market of a century earlier prior to the advent of personnel departments and related institutions common to internal labor markets as one of a "floating pool of casual workers" (Eichengreen 1995). Even if the influential estimates of Carter and Savoca (1990) suggest this characterization is overstated, they still find a rise over time in employment stability.

Trends in agricultural labor markets provide an interesting source of comparison with trends in labor markets in developed industrialized economies for a number of reasons. Insofar as industrialized economies have at some point experienced a structural shift of their overall labor forces away from agriculture, job stability tendencies in agriculture provide a benchmark for pre-industrial tendencies. Insofar as agricultural labor markets are subject to seasonal fluctuations in demand and insofar as they involve relatively small production units less subject to bureaucratic employment processes and consequent development of internal labor market structures, this might lead one to expect far more job instability in agriculture than other sectors of the economy. It is presumably for these sort of considerations that numerous studies in the modern labor economics literature confine themselves to non-agricultural employment.

Insofar as markets for agricultural hired labor have been casual with high worker turnover, there might seem little interest in examining them further for purposes of studying trends in job-stability once their casual character has been verified. However, the existing literature on long-term trends in job stability in English agricultural labor markets suggests a considerably more complex picture than simply one of a “floating pool of casual workers.” First, most accounts by historians of English agricultural labor markets of the 17th, 18th and 19th centuries emphasize the considerable regional and local variation in hiring and contractual arrangements which occurred. These could range from year-long or multi-year contracts for farm servants and skilled workers to casual day labor to gangs of women, children, and young adults contracted out on a temporary basis by gang masters to whichever farmers was in need of their services. Acknowledgement is also made of core-periphery work forces with a core of permanent or at least longer-term workers on a given farm along side a more fluctuating group of shorter term workers with varying degrees of transiency. (See Armstrong, 1988, Snell 1985, Howkins 1992).

Second, it has been suggested by a number of accounts, that despite retaining a non-bureaucratic hiring structure, employment stability has actually increased over the longer term for English farmworkers, at least in some regions of the country, since the mid-nineteenth century. It has been argued that more buoyant demand for farm labor prior to the nineteenth century, lead workers to be more willing to search for alternative opportunities while extensive turnover also lead farmers to be more confident that they could replace departing workers. As the demands of the non-agricultural sector increasingly siphoned workers out of agriculture during the nineteenth century, farmers became increasingly eager to retain remaining workers on a more regular basis. Moreover, the declining use of women and children in agriculture, in part reflecting government regulation and compulsory schooling laws, lead to more use of more

regular work processes. And changes in production technology, including increased mechanization, and in general raising labor productivity lead to smaller but more regularly employed work forces. While subject to considerable regional variation, these trends have been particularly noted in Eastern counties in England such as Norfolk, Suffolk, and Essex. (Newby 1977, Howkins 1985, Robin 1980). Robin and Newby in particular have documented for the period from 1861 on in one Essex villages and for the 1970's for a sample of Suffolk farmers a considerable degree of employer attachment. Robin (1980, p.75) found that in Elmdon, an Essex village, that in 1861 onwards, 87 percent of farm workers in the village were born there. Newby (1977, p.157) notes that 30 percent of the Suffolk farm workers he interviewed in the 1970's currently worked in the parish in which they were born with another 17 percent working in a neighboring parish. Newby also reports that average length tenure for the Suffolk farm workers interviewed on their current job was 16.7 years (Newby, 1977, p.161). In part these tendencies have been explained by an increased insularity of those rural workers that have chosen to remain in what has been a markedly declining sector in relative terms.

This paper will examine the stability of farm work from Victorian times onwards, focussing on Norfolk and some other Eastern and Southern counties. It employs two different types of sources in order to examine career elements of farm work in Victorian England. First, a set of farm workers for whom marriage registers have been linked to census records for the county of Norfolk are employed in order to examine the extent of occupational continuity between marriage and census reporting date and between father and son, and the extent of migration. Second, sets of weekly farm labor accounts for a number of farms in Victorian and Edwardian England have been collated to examine the extent and nature of worker tenure and turnover on each farm. While the issues addressed with each type of source are of interest in their own right, the sources can also

be viewed as providing complementary perspectives on the issue of job stability. The marriage to census linked records can be viewed as providing upper bounds on the extent of experience weighted job tenure, that is weighted by that of the individual worker. Furthermore census this data is sampled from some 69 parishes from throughout Norfolk, it can be viewed as a reasonably representative sample. The farm labor accounts come from only a few farms and there is reason to think that experience could fluctuate considerably across farms with respect to tenure and turnover of workers. However, these sources do indicate a job-weighted measure of tenure and at least indicate what was feasible. They also provide a basis for beginning to consider why the patterns observed on each farm may have occurred.

I. Marriage to Census records

A. Description of the data. Marriage registers for 69 Norfolk parishes for the period 1867-74 were linked to the 1881 English Census using the surname index for this census prepared by the Family History Library at Salt Lake City, Utah. Use of the surname index yielded a match rate of about 40 percent. The issue of selectivity bias in matched versus unmatched observations was assessed by comparing literacy rates and intergenerational occupational change between father and son for the two sets of observations. Literacy rates were almost equal between matched and unmatched observations. The unmatched data did show by crude measures roughly a ten percent higher rate of intergenerational occupational change than the matched observations. These issue of selectivity bias and selectivity corrections will be explored further as this data set is developed.

B. Intergenerational and career mobility and Geographical Migration.

1. Recruitment.

One indicator of the nature of the agricultural labour market in Victorian England is provided by considering the family origins of those who were recruited into such

work. Although the agricultural sector was declining in relative terms in Britain in the second half of the nineteenth century, agricultural labor was still quite substantial quantitatively amounting to about a fifth of the overall English adult male labor force in 1851. Insofar, as the agricultural labor market was a spot one, well integrated with the overall labor market, one might expect that recruiting a labor force of this size would involve recruiting those of diverse social origins. However, a counter perspective is that farm labor involved a distinctive way of life and that those recruited would come disproportionately, perhaps exclusively from children of agricultural labourers.

The sample under consideration here of Norfolk labourers does indicate disproportionate if not exclusive recruitment of agricultural labourers from those whose fathers were agricultural labourers.

Social origins of Norfolk grooms, 1867-73 who reported agricultural labourer occupations

Father's Occupation	Percentage of all Ag. Lab. Grooms
Agricultural Labourer (Labourer or Agricultural Labourer)	78.99 %
Agricultural Skilled	3.64%
Farmer	2.22%
Non-Agricultural Occupations	15.15%
No. of Observations	495

On the one hand it can be noted that some 15 percent of agricultural labourers in this sample were recruited from those whose fathers were in non-agricultural occupations. So recruitment into this work from outside the agricultural sector was a possibility. On the other hand, compared with other occupations, this would seem a quite high rate of intergenerational self-recruitment. In a national sample of

marriages for England for the period 1869-73, the rate of exact title inter-generational self-recruitment was 39 percent.

Intergenerational Self-recruitment for selected occupational groups from A sample of marriages, 1869-73.

Occupational Group	% with Fathers in Occ. Group	No. of Observations
Construction	46%	304
Farmers	83%	160
High Skill Textiles	34%	143
Miners	49%	317

As the table above indicates for other occupational groups, self-recruitment tended to be much lower, the one exception being farmers. The markedly lower self-recruitment rate for miners is of particular interest, since mining has had a reputation for high rates of self-recruitment due to maintaining a distinctive way of life. In part, the low rates of self-recruitment for miners here, can be attributed to the expansion of this sector of the economy in the last half of the 19th century. For the period 1839-43, the rate of intergenerational self-recruitment for miners was 73 percent.

Thus, agricultural labourers in Norfolk in the later nineteenth century tended to come disproportionately from those whose fathers were agricultural labourers.

2. Intergenerational Mobility. For those whose fathers were agricultural labourers in the sample, rates of occupational inheritance were quite high.

Groom's Occupation for Sons of Agricultural Labourers in Norfolk	Percentage reporting Occupation
Agricultural Labourer	78.4%
Agricultural Skilled	4.6%
Farmer	0.6%
Non-Agricultural	16.4%
No. of Observations	499

It should be noted that since the sample itself of marriages consisted of those from rural parishes throughout Norfolk, sons of agricultural labourers who had migrated and married in urban areas and/or outside of Norfolk would not be captured in the sample. For these reasons, the results above probably overstate the overall degree of occupational inheritance among all sons of Norfolk agricultural labourers in the early 1870's. This is evident in national samples which show rather lower rates of occupational inheritance for sons of agricultural labourers or labourers generally. In a national sample of marriage registers for the period, 1869-73, only 36 percent of the sons of agricultural labourers were in agricultural labor or labourer occupations and 60 percent of sons of labourers were in agricultural labor or labourer occupations.

It can also be noted that the tendency to follow in their fathers' occupational footsteps, falls markedly with age, until older ages.

Sons of Agricultural labourers
Age at 1881 Census

Groom's Occ. At Marriage 1867-74	< 30	30 to 39	40 to 50	>50
Ag. Lab.	88.10%	80.62%	62.82%	79.63%
Ag. Skill	2.38%	4.00%	7.69%	5.56%
Farmer	0	0.31%	2.56%	0
Non-Ag.	9.52%	15.08%	26.92%	14.81%
No. of Obs.	42	325	78	54

3. Intragenerational or Career Mobility and Continuity.

To what extent did those who started as farm labourers at early stages of their careers, remain in that occupation? One might expect that with agriculture as a declining sector that movement out of agriculture would occur, but it remains to verify this.

Census occupation categories in 1881 for those who were agricultural Labourers at Marriage between 1867-1874

Census Occupation in 1881	Percentage in each category
Agricultural Labourer	66.06%
Agricultural Skilled	7.68%
Farmer	1.62%
Non-Agricultural	24.65%
No. of Observations	495

A fair amount of career continuity was evident. But there was also a non-trivial amount of mobility. Though not surprising given that agriculture was a declining sector, it is of interest to note that for those shifting to other occupations than agricultural labourer, non-agriculture was the main destination.

Movement to non-agricultural occupations appears to have occurred at a somewhat higher rate for those under the age of 30 at the time of the 1881 census than those of older ages. However, movement to agricultural skilled positions and farming occurred at a higher rate for those above the age of 30 at the time of the 1881 census.

Career mobility from marriage 1867-74 and 1881 census for those who were agricultural labourers at marriage.

Age at time of 1881 Census

Census Occupation	< 30	30 to 39	40 to 50	>50
Ag. Lab.	65.22%	66.87%	64.06%	64.29%
Ag. Skill	4.35%	9.12%	6.25%	3.57%
Farmer	0	0.91%	3.12%	5.36%
Non-Ag.	30.43%	23.10%	26.56%	26.79%
No. of Obs.	46	329	64	56

Career mobility from Marriage 1867-74 and 1881 census by age at census for those who were agricultural labourers at marriage AND whose fathers were agricultural labourers.

Age at 1881 Census

Census	<30	30 to 40	40 to 50	>50
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Occupation				
Ag. Lab.	70.4%	66.41%	67.35%	65.12%
Ag. Skill	5.41%	8.78%	6.12%	2.33%
Farmer	0	0.76%	4.08%	6.98%
Non-Ag.	24.32%	24.05%	22.45%	25.58%
No. of Obs.	37	262	49	43

Restricting the sample to those whose fathers were agricultural labourers does exhibit a somewhat greater tendency for agricultural labourers who were younger in the 1881 census to remain in agricultural occupations between marriage and the 1881 census date.

To what extent did literacy promote career mobility for those who started out as agricultural labourers at marriage. The answer would seem to be that it literacy did promote career occupational mobility but to a limited degree.

	All Fathers		Father Ag. Lab	
Census	S	X	S	X

Occupation				
Ag. Lab.	61.73%	70.16%	63.64%	69.8%
Ag.Skill	9.05%	6.05%	8.56%	5.94%
Farmer	0.82%	2.42%	1.07%	2.48%
Non-Ag.	28.48%	21.37%	26.74%	21.78%
No. of Obs.	243	248	187	202

Intragenerational mobility can be regarded as placing an upperbound on the degree of job or employer attachment. Insofar as those who were agricultural labourers at marriage during the period 1867-74 had changed occupations and especially if they were no longer in either agricultural labourer or agricultural skilled occupations by the time of the 1881 census then one can presume they had changed employers by this date. Using this measure, for those who were working for some farmer in Norfolk as an agricultural labourer at marriage during the period 1867-74, no more than 73.7 percent total could be working for the same employer in 1881 and no more than 66.06 percent as agricultural labourers. This is still a relatively high degree of roughly ten year persistence working for the same employer, though it is obviously also a very crude upper bound measure.

3. Migration.

One can narrow down further the percentage of those who started as agricultural labourers at marriage during the period 1867-74 who would have been employed continuously by the same farmer through 1881 by considering the extent of geographical migration between marriage and the census. Those who reported residence in a different parish in the 1881 census than at marriage during the period 1867-74 can be presumed to have changed employers at least once during this period. While those who reported the same parish at marriage and in the 1881 census can be presumed to have had at least some prospect of remaining with the same employer. Of course there may

be a number of reasons why this prospect would not be realized. Even workers remaining in a given parish over time may have had a choice of farmers to work for, especially on so-called open-parishes where labourers cottages would have been on the interstices of a number of farms. There is also the possibility of migration and return to original location between marriage and census. Given common characterizations of agricultural labourers in East Anglia as subject to considerable short distance migration and turnover of employers, it would seem of interest to examine the extent to which this actually occurred.

The following table reports for 327 males from Norfolk who reported being agricultural labourers BOTH at marriage sometime between 1867-74 AND in the 1881 census, the percentages who remained in the same parish between marriage, the census and at birth.

Marriage Parish = 1881 Census Parish	Birthplace = Marriage Parish	Birthplace = Marriage parish = 1881 census parish
55.3%	52.6%	39.4%

On the one hand these figures suggest reasonably high rates of geographical persistence with over half of all “career” agricultural labourers reporting the same parish at marriage and at the census approximately 10 years later. However, these figures only represent point in time snap shot pictures of location without making allowance for migration between birth, marriage, and census. Some indication of the possible degree of bias is indicated by considering the birth places of children reported for these agricultural labourers in the 1881 census. Of the 181 agricultural labourers both at marriage and census who reported the same parish at marriage and at the census, 30 can be identified as having children for whom a birth place was reported other than the

marriage/census parish reported by the father. This implies that AT LEAST 16.6 percent of these agricultural labourers moved at some point between marriage and census even if returning to the marriage parish at census. One should also note further problems in reported marriage and census and birth place parish as discussed in further detail in Higgs 1996 and Snell 1984. Nevertheless the figures can still be interpreted as implying a considerable degree of residential attachment even if not complete immobility. (Also see Hochstadt 1999 for a discussion of how finely detailed German migration records provide a different picture from snapshot measures of migration.).

Taken at face value, a further upper bound on the degree of job or employer stability implied by the occupational mobility and migration figures combined would be that of the 66.06 percent of those who were agricultural labourers at marriage and continued to be agricultural labourers about 10 years later at the census, 55.3 percent were also residing in the same location at both dates and hence potentially working for the same farmer. This implies an upper bound of 36.5 percent ($.553 \times 66.06$) who would have been working for the same farmer over this approximate 10 year interval. If one adjusts the 55.3 percent downward by another 16.6 percent to allow for migration between marriage and census one ends up with a figure of $.834 \times .553 \times 66.06 = 30.5$ percent. By way of comparison, Abraham and Farber (1987) find that 49 percent of U.S. blue-collar workers during the period 1968-1981 completed job durations of at least ten years.

Further one can note that even those agricultural labourers who did move between marriage and census could conceivably have had potentially reasonably lengthy tenures with the same employer. This is suggested by considering some 24 cases where the agricultural labourer moved between marriage and census and for which one can identify the age of at least one child born in the census parish. For this group, the mean age of the oldest children so identified was 6.8 years, implying residence in the census

parish for at least this period of time and hence possible employment with the same farmer for this period of time.

Thus, the picture in the 1870's and 1880's indicates substantial occupational continuity and substantial occupational mobility roughly ten years out for those who started as agricultural labourers at marriage, with two thirds remaining in the occupation and one third changing. Similarly the evidence considered here indicates both geographical persistence and mobility with about half of those who remained as agricultural labourers moving and half staying in the same parish as at marriage. I have also compiled a sample of agricultural labourers from Norfolk married during the period 1837-43 and have linked them with the 1851 census. I hope in future work to consider changes in occupational and geographical mobility between the 1840's and the 1870's based on this evidence.

C. Job duration Evidence from Farm Labour Account Books

1. Norfolk farm, Belaugh/Hoveton St. Peter.

The evidence considered so far is based on a sample of those engaged in agricultural labour, focusing on those married in Norfolk and linked to the 1881 census. Though providing a crude upper bound measure of employer attachment, the sample can make some claim to representativeness. Since it is based on a sample of workers, it can be regarded as what the literature on job duration has labeled experience-weighted duration (see Akerlof and Main, 1981; Jacoby and Sharma, 1992). At this point, the paper turns to evidence from farm labour account books for Norfolk and some other English counties for the second half of the nineteenth and first half of the twentieth centuries. The account books were done on a weekly basis and the basic set of statistics to be considered here concerns how many weeks each worker entered at some point

remained on the books of a given farm. Since the basic unit of observation thus becomes the length of spells of attachment, no matter how long or short, the measures considered in this section generally correspond to what the literature on job duration has labeled termination-weighted duration (Akerlof and Main, 1981; Jacoby and Sharma, 1992).

The basic source to be considered here comes from account books for a farm in Norfolk that was located north-east of Norwich in the parishes of Belaugh and Hoveton, St. Peter. These account books are currently held in University of Reading Library. The surviving account books run from 1859 through 1938 and thus offer continuous information on the employment practices on the farm for almost eighty years. Since copying constraints have only permitted at this point, selective sampling this farm's labour book, the focus will be on three time periods: 1859-64, 1915-16, and 1937-38. This implies some truncation of observed periods of attachment, though for the earlier period workers remaining attached for longer periods of time are picked up through samplings of account books for intermediate intervals.

For the initial period to be considered, 1859-64, the farm hired on average per week, 9.6 total workers for the first six months of the year 1863 and 6.1 male workers for the first six months of that year. According to the 1861 census, the farmer who ran the farm, Benjamin Ling, was a farmer of 186 acres with 8 men and 3 boys. The account book ending in fall of 1863 indicates that 37 acres were planted in wheat and 36 acres were planted in Barley that year.

In defining attachment to the farm as measured by having ones name show up on weekly labor account books, one can distinguish between the total interval over which a given worker showed up at certain points on the account book and the number of spells of separate employment. Thus, over the period, 1859-64, a number of workers showed up at frequent intervals on the account books but with frequent intervals of interruption. Here reference will be made both to the total interval over which a given

worker showed up at some point on the account books and the number of spells of separate employment within that interval.

During the initial period, 1859-64, there is evidence of considerable turnover of the labor force, with a number of workers experiencing only short spells of employment but there also appears to have been a core group of workers who showed over longer intervals of time, though also subject to frequent spells of interruption.

Of some 43 adult male workers, who showed up on the books at some point over the period 1859-64 for the farm, 11 or 25.6 percent had a total interval of attachment to the farm of 4 weeks or less. And 7 of these or 16 percent of the total only showed up for one week on the farm labour books. Of the 43, 28 or 65 percent showed up on the labour books for an interval of 40 weeks or less, implying an overall period of attachment or association with the farm of less than one year.

However, 15 or 35 percent of the adult male workers had a period of attachment of 51 weeks or more with some 8 or 18.6 percent having an interval of attachment of 150 weeks or more, i.e. at least 3 years. It is noteworthy that these workers were not employed continuously on the farm but instead showed up on the farm labour books as having multiple spells of employment of the farm. Even for the 8 workers attached for 3 years or more to the farm, the average number of spells of employment was 7.9.

The pattern of spells of employment for 5 different workers from this time period are plotted in the five figures below. The first figure plots days of employment per week against the various weeks of the 6 year period covered by the graph. Figures 2 through 5 plot whether or not a given worker was working or not for the various weeks covered. This was because for these four cases descriptions of tasks and time per week left considerably uncertainty as to the exact number of days worked per week. Suffice it to say there was considerably further scope for variation for the cases reported here in the

days worked per week over and above that exhibited in these four figures in the weeks worked per year.

Further indication of the use of transient labour was the extensive listing of women, boys and girls on the labour book for this period. Some 16 boys, 6 women, 2 girls, and 1 female of undefined age range were listed on the labour books for the period 1859-64.

Figures 1 to 5 about here – for 1859-64 period.

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2. Other English farms for this period.

Historical accounts of the nature of agricultural labour terms of hiring for the mid-nineteenth century emphasize the considerable range of variation possible, even within the East and Southeast region to which this paper is primarily confined (see Armstrong 1988 and Howkins 1992). So it is clearly not appropriate to generalize on the basis of one farm account book. However, to provide some basis for comparison, reference can be made here to evidence from some other account books for other counties of England

for this period. Account books for two different farms in Essex suggest somewhat greater degrees of worker attachment, though in one case, with similar patterns of interrupted employment. For one Essex farm account book covering the period 1864-7, of 6 men on the account books, 5 show up through out the entire period, although only one was continuously employed for all weeks throughout this period. Dogget's farm in Essex exhibited considerable continuity in its farm work force. Of 23 adult male workers employed for 6 days a week or more in December, 1873, 16 or 69.6 percent of them were employed on the farm three years later in December, 1876. Moreover, 13 of these workers or 56.5 percent were employed on the farm in 1882 for a tenure of at least 9 years and 8 or 34.8 percent were employed on the farm in 1890 for a tenure of 17 years. Upton farm in West Sussex, exhibited somewhat less continuity in its work force. Of a total of 36 male workers listed on its books in 1851-2, 31 percent were still on the farm account books 5 years later in 1856-7 and 22 percent 10 years later in 1861-2. With a decline in overall size, there was only a modest increase in the extent of continuity on Upton some 35 years later. Of 26 workers on the books in 1885-86, 35 percent were on the books 5 years later in 1890-91 and 23 percent 10 years later in 1894-95.

3. Norfolk – Belaugh/Hoveton St. Peter 1915-16.

Fifty years on, the Norfolk farm considered above exhibited considerably more employment continuity during the year 1915-16 than over 1859-64. Since only a 51 week period is covered, the truncation of observed spell of employment is considerably greater in the later time period than the earlier time period. Of the 27 men listed on the account book at some point over the 51 weeks the book covers, 10 or 37 percent were employed for 49 to 51 weeks. Another 7 or 26 percent worked for 25 to 43 weeks, that is at least half a year or more. It is noteworthy that these 63 percent of the overall adult male workforce either worked continuously with no interruptions or with only one interruption. Another 4 men worked between 10 and 20 weeks, though subject to

multiple spells of interruption, 7, 1, 6, 8. Another 2 men worked 5 and 8 weeks, another 1 for 4 weeks and another 3 for 1 week only. In this later period, far less use of women and children were evident than in the early 1860's. Only three boys and 1 woman were listed on the book for 1915-16. In all cases the work was continuous, subject to no spells of interruption and the boys were listed as employed for every week of the year.

4. Norfolk – Belaugh/Hoveton St. Peter 1937-38. This greater employment continuity for 1915-16 appears to have been maintained through the period 1937-38.

First, no women or children were employed. All 20 people entered were adult males. Of these 20 men, 15 or 75 percent were employed for 46 or more weeks of the 52 recorded and 11 or 55 percent for 50 or more weeks. Of these 15, 10 were employed continuously with no break. Moreover, days worked per week tended to be the entire week with the number of days entered as "weekly." A representative profile of days worked per week over this year is plotted in Figure 6. Of the remaining 5 men, 3 were employed for 10 to 26 weeks and then with either no gap or only 1 break, 1 was employed for 4 weeks and 1 for 2 weeks.

Figure 6 about here --- for period 1937-38.

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5. Howkins (1991) has asserted that by 1900, the farm worker market in the East and South of England had already become far less casual than in the mid-nineteenth century and that the earlier bifurcation between a core work force which tended to have long-term attachment to the farm and a much more transient casual group of workers was ending.

Evidence from the Belaugh/Hoveton farm supports Howkins first point that long-term attachment was already common by 1900 but it is in at least one respect more equivocal on whether the bifurcation between a core long-term tenure group and a more

transient group had ended. A relatively crude measure of terminated weighted duration is provided by considering for those workers reported the first week of the farm year for certain years, how many total farm-year first weeks they showed up on the account books for the period 1902 to 1938. Among other shortcomings, this measure is subject to truncation at the initial and terminal dates.

For October 10, 1903, of the 17 workers (including both men and boys) listed for the week, the median number of years for which they showed up on an October account listing for the farm between 1902 and 1938 was 9 years. Of the 17 workers, 3 workers were listed on an October listing for over 20 years while only 3 workers showed up for less than 5 years and only 2 workers for 1 year. Allowing for the truncation due starting with books only in 1902 would suggest that the actual median tenure was even longer than 9 years. Ten years later, in 1913, there is evidence of widening bifurcation of worker tenure. Of 19 workers listed on the account book for the week of October 18, 1913, 9 were listed on the accounts of the farm in October for 9 years or more including 4 for 20 years or more. However, 10 workers were listed on the farm October accounts for 6 years or less including 6 workers listed for only 1 year. Twelve years later, in 1925, an even wider bifurcation is evident. For the week of October 10, 1925, of 16 workers listed, 8 were listed on October accounts for 13 years or more, with 3 workers for 20 years or more. Another 8 were listed on the October accounts for 7 years or less with 2 workers for only 1 year. Finally, the last year for which accounts for the farm survive, for the week of September 24, 1938, of 14 workers listed, the median tenure of listing on October accounts was 11 years with 10 workers on the books for 7 years or more but also 4 on the books for only 1 year.

6. Interpreting the rise in employment stability in Belaugh/Hoveton St. Peter. In examining what factors may have contributed to rise in employment stability that has been noted here, one begin by considering whether the forces at work were general, i.e. at least

region wide if not national and to what extent factors specific to the individual farm under consideration may have been at work. That general, region-wide factors were at work is suggested by the fact that other accounts of East Anglian agriculture for this period have argued for a rising stability of employment. Howkins (1985) account of Norfolk farm workers between 1870 and 1920 claims that before 1870 the Norfolk farm worker market had a large element of casual workers. He indicates that in the late 1860's this changed and Norfolk farming gradually shifted to a smaller and more regularly employed labor force (Howkins 1985, p.10). Newby's (1977) sociological study of Suffolk farm workers in the 1970's argues that the substantial degree of employment regularity and employment attachment he finds emerged largely in the twentieth century with mid-nineteenth century agricultural labor markets being far more casual. These assessments suggest that the factors at work were not specific to the farm under consideration here.

In accounting for the increase in employment attachment, the literature on late nineteenth and early nineteenth century English farm labor markets points to two general types of explanations. One class of explanation focuses on aspects of employer demand involving shifts from arable to pasture farming and other changes in methods of production that would reduce the temporary demand for casual labor. Howkins (1991) points to three specific factors here. First is the shift from arable to pasture farming with a consequent reduction in labor requirements per acre of land farmed. Second is the shift away from mid-Victorian high farming with its tasks such as weeding, stone-picking and hedging and ditching. With a reduction in the call for such tasks may have come a reduction in demand for more casual workers to perform them. Third is increased mechanization with a consequent reduction in labor demand especially during previous peak periods such as the harvest.

A second class of explanation can be termed the thin labor markets hypothesis.

This explanation argues there were changes both in demand behavior of farmer employers and the supply behavior of farm workers as both the number of farmer employers and farm workers contracted in late nineteenth and early twentieth century Norfolk. From the perspective of employers, there was a shrinking supply of farm workers. Howkins (1985) points to two factors at work here. First there was a shrinking supply of migrant harvest workers. Second, there was a widespread depopulation of rural Norfolk. Both of these factors contributed to tighter agricultural labor markets and an increasing reluctance by farmers to rely on temporary recruiting to meet peak seasonal labor demands. From the perspective of farm workers, Newby (1977) argues that workers who chose to remain in agriculture perceived a lack of opportunities in the sector. They were thus likely to commit early on in their career to one employer rather than repeatedly search for better positions as suggested in accounts of high labor turnover on mid-nineteenth century farms. In accounting for the high average length of service on current farms of the Suffolk farm workers he surveyed in the 1970's (with an average length of tenure on their current farm of 16.7 years [Newby 1977, p.161]) he puts particular emphasis on the strength of personal relationships between farmers and their workers (p.165).

Two further more specific factors can be mentioned. One is the rise of farm workers' unions in Norfolk during the twentieth century. Farmers could have offered more regular employment either to forestall union organizing or under pressure of union demands. A second would be particular tightness of agricultural labor markets during the two world wars (see Armstrong, 1988, p.166).

Finally, one more general factor mentioned by Eichengreen (1995) is an increase in the importance of firm specific human capital.

Here, some preliminary comments can be about the role of some of these factors. Narrowing down more precisely the apparent shift to more regular employment

between 1864 and 1915-16 may offer some guidance. Very preliminary consideration of the 1900-01 account book suggests more regularity of employment by this date compared with the earlier period. This would suggest that this trend antedates World War I and possibly the rise of farm worker's union activity in Norfolk in the twentieth century (though nineteenth century activity also has to be more fully considered.)

One can at this point turn to some further information about the specific farm under consideration here. Two striking contrasting trends during the period under consideration were the marked increase in both acreage farmed and men employed and a fall in yield per acre. Census manuscripts from 1861 to 1881 list Benjamin Ling, the farmer who ran the farm during this period as farming 186 acres with 8 men and 3 boys in 1861, 420 acres with 15 men and 4 boys in 1871 and 410 acres with 10 men and 5 boys in 1881. Thus between 1861 and 1871, the farm more than doubled in acreage and almost doubled in the number of men employed. However, the cut back by a third in the number of men employed between 1871 and 1881 leaves the farm at the latter date with over double the acreage but only a quarter more men as in 1861. Similar trends are evident in the farm account books over this period. However, grain yields per acre appear to have fallen, while the labor bill rose as a proportion of receipts. Between 1863 and 1900, bushels per acre harvested in wheat fell from 42.2 to 30 and bushels per acre harvested of barley fell from 47.1 to 39.5. The earlier yields may have been unusually high as Howkins gives a county-wide average yield for wheat in Norfolk in mid-1880's through mid-1890's of 31.4 bushels (Howkins, 1985, p.5). The labor bill, that is total expenditures on labor for the year rose as a proportion of receipts from sale of wheat and barley from .428 to .623 between 1863 and 1900 and as a proportion of all receipts including from livestock from .111 to .170. However, these sections of the account book may not give a complete picture of receipts and expenditures of the overall operation. The fall in yields could be associated with extending the margin of cultivation

of the farm to less fertile land. In general a rise in the acreage of the farm would seem to have been associated with the shift to a more permanent workforce on the farm.

However, counter to suggestions by Howkins (1991), the shift to a more permanent workforce evidence after 1900 was not clearly associated with either a reduction in the workforce or in the complete abandonment of use of boys and women.

Time period	Number of Men	No. of Boys	No. of Women
1861 (census)	8	3	
1871 (census)	15	4	
1881 (census)	10	5	
1902-11 (average)	15.3	2.9	0
1912-14 (average)	14.6	3.33	0
1915-17 (average)	10.66	3.66	.66
1919-26	15.125	2.5	.625
1927-38	16.58	0.416	0

The fact that the number of people on the farm did not clearly decline and the ongoing employment until the penultimate decade of at least some women and boys on the farm's work force would not seem consistent with the first class of explanation focusing on changes in the nature of output and production methods.

However, that there was some change in farm practice is suggested by the reduction in the coefficient of variation over the farm year in the weekly wage bill.

Time period	Coefficient of variation over the farm year in weekly wage bill
1862	1.088
1881	0.8135
1891	0.934

1900-01	0.8355
1901-13	0.692
1914-17	0.678
1919-22	0.342
1922-30	0.484
1932-8 (selected years)	0.477

Conclusions. Occupational mobility and migration evidence suggest the simultaneous presence of both persistence and turnover in the Norfolk farm workforce of the last quarter of the nineteenth century. The one farm considered in some detail here indicates that it was possible for a given farm to shift in the direction of more regular employment of labor. Previous historians of Norfolk agriculture have suggested this possibility for agricultural labor markets more generally in Norfolk and one aim here has been to document an actual case of this. Eichengreen (1995) suggested two factors contributing to rising job duration in the Twentieth century compared with the Nineteenth, the rise of the multi-division enterprise and the increasing importance of firm-specific skills. The case considered here suggests the possibility that agricultural labor markets could develop patterns of regular employment even in the absence of a multi-division organization. The thin labor markets hypothesis seems to emerge as a leading contender for explaining these trends.

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