

Labour force dynamics in a rural part of South Africa: the Agincourt sub-district of the Northern Province, 1992-2000*

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November 2001

Urban-rural divisions have been central to the political and economic history of South Africa. The policy of apartheid had an explicit geographical dimension, with Africans restricted to the homelands and allowed into the “white” urban areas only under permit. The homelands were subject to a form of indirect rule, in which “traditional” systems of governance and land holding were propped up. Nevertheless there were massive interventions in the social fabric of these areas, including the creation of “betterment villages” and resettlement camps.

As a result, South Africa’s process of economic development showed some peculiar distortions. In particular the processes of migration and urbanisation took a displaced form, with large concentrations of people in areas which do not seem to have either the agricultural potential or the commercial or manufacturing base to sustain them.

The lifting of migration controls in the mid-1980s relieved some of these pressures, but this period coincided with a deepening economic and political crisis. Unemployment started to rocket and many of the homeland areas had nascent or fully-fledged rebellions. Furthermore South Africa’s proxy war in Mozambique led to additional pressures on some areas in the form of an influx of refugees.

*Paper prepared for the DPRU/FES Conference “Labour Markets and Poverty in South Africa”, Johannesburg, 15–16 November 2001. Work is still in progress. Feedback would be appreciated, but please do not cite at this stage. We would like to thank Steven Tollman and Kathy Kahn for their support of this work.

The end of apartheid in 1994 therefore potentially marked an important turning point for many of these areas. In particular the weakening of the traditional authority structures and greater representation at the central government level, should have opened up new opportunities to rural women.

Nevertheless the 1990s saw additional stresses. In the first instance, the process of economic restructuring attendant on the opening up of the South African economy led to large-scale retrenchments in sectors such as mining, which had been one of the key employers of rural men. Secondly, the nascent AIDS pandemic was to start making serious inroads into the population of these areas.

Given their history of social deprivation an understanding of the population dynamics in the rural areas is critical to understanding many of South Africa's development challenges. In this paper we seek to describe some results for one particular rural area in South Africa. Our aim is both to introduce a useful data source for monitoring some of these changes, as well as to reflect on the changes themselves.

1 The Agincourt Health and Population Unit

A pre-requisite for an appropriate policy response has always been accurate population information and the development of properly evaluated intervention strategies. This was the rationale behind the Department of Community Health of the University of the Witwatersrand establishing in 1992 the Agincourt Health and Population Unit (Tollman 1999, Tollman, Herbst, Garenne, Gear and Kahn 1999). The Unit aimed to address issues around decentralization of health services and to provide accurate information for planning. The strategy was to conduct health and demographic surveillance, underpinning a programme of inter-disciplinary health and population research. The field site selected was the Agincourt sub-district of the Bushbuckridge region of the Northern Province (see Figure 1). On-going demographic surveillance is appropriate since the area lacks a functioning vital registration system.

The site is particularly interesting, since it formed part of the previous Gazankulu homeland. It is close to the Mozambique border and has a significant subpopulation of Mozambican refugees. These refugees come from the same language group as the South Africans, but they form a distinct subpopulation. Indeed, many of them live in villages which consist predominantly of refugees.

The area also adjoins the Kruger National Park and is close to a number of other game lodges. Indeed these are some of the main sources of formal sector employment in the area.

1.1 The DSS

The Agincourt Demographic Surveillance System (DSS) began in 1992, when a baseline census was conducted in the twenty villages that comprise what is now

the Agincourt sub-district of Bushbuckridge. Village maps were constructed and each household visited, with information obtained on existing household members, including those temporarily absent due to migration. There have been seven census rounds altogether (1993,1995,1997 and annually since 1999) with six available for analysis. In the last few years, a new RDP housing project has increased the number of villages in the system to 21.

At each census every household in the field-site is visited by a field worker who interviews the most senior responsible adult in the household. The respondent provides information on all household members. Vital event updates capture information on demographic events that have occurred in the preceding intercensal period: all births, deaths and migration events. If a death has occurred a verbal autopsy team is notified, who revisit the household to conduct a verbal autopsy interview. This is conducted by a trained lay fieldworker in the vernacular, and assessed by medical practitioners to establish the main cause of death, as well as immediate and contributing causes (Tollman 1999, Tollman et al. 1999, Kahn and Tollman 1999). In addition several individual attributes are captured, such as residence pattern, level of education and relationship to the household head.

Resident status data is updated in each census round and is used to identify temporary migrants. These are people who are registered in a household in Agincourt, but do not live there permanently. A cut-off point of six months residency in a year was chosen to designate temporary migrants from permanent residents. Thus, people who are referred to as temporary migrants in this study were absent from the household for more than six months of the year preceding observation, but who considered the index household to be their home base. This excludes people who left the index household and established a household elsewhere which they considered to be their new home base. Such an individual was out-migrated from the index household, and if the new household was in the study-site then the person was registered there. This distinguishes temporary migrants from definitive migrants, the latter of whom fall more easily into the conventional definition of a migrant, i.e. those who experience a change in residence (Bilsborrow and United Nations Secretariat 1993). Note that when we refer to the “de jure” population in the analyses below, we are referring to the total population, i.e. temporary migrants and non-migrants. For temporary migrants there is a change in residence but it usually has a short-term utility and is not a permanent move. In particular this definition captures the classic scenario of circular or oscillating labour migration, which is extremely prevalent in rural Southern Africa. If a person on a household roster was absent at the time of the census then the respondent’s understanding of their intention to return determined whether to out-migrate the person or keep them on the household roster.

At different censuses additional modules were administered. These modules provide more detailed information on particular attributes of interest. The 2000 census update round contained a labour module. This recorded salient features of labour force participation on all de jure persons in the sub-district aged 10 years or older. The definition of “working” and categories of unemployment

were derived by starting with conventional definitions and undertaking a process of discussion and refinement with local field staff and community members. Several iterations of questionnaire piloting were conducted in the study site and elsewhere in Bushbuckridge. For the study, “work” was defined as an activity that brought income or resources into the household from outside. Categories of unemployment included whether a person was looking for a job, subsistence farming, doing primarily home domestic work, a student, not looking for a job, disabled, a volunteer, in between fixed period work, in between occasional work, or other reason. The employment status variables: ‘Ever worked’, and ‘Currently working’ were both included as dichotomous yes/no variables. Whether a person was a student and/or received a pension was also recorded. Variables that described either the current job or the previous job (if currently unemployed) were: type of work, sector, type of contract, employer, place of work, place code and tax status. If a person held two jobs the secondary job details were included.

The total number of individuals for which the labour status questionnaire was completed was 49087. This comprises the whole population of the Agincourt sub-district aged ten years and older.

1.2 The nature of the data

The information in the DSS is captured on a longitudinal database, custom-designed in Microsoft Access. The information is referenced to a physical location (a dwelling) as well as to a household. The latter is captured through the set of relationships to a head of household (as defined by the members). One of the implications of this is that if the head dies or outmigrates, then the household gets a new identity in the system. Individuals, however, keep their individual identity codes, unless they leave the dwelling. At present it is not possible to track movements of individuals between households in the study site. Hopefully we will be able to address this issue in due course.

One of the strengths of the data set is that we can track population changes over an eight year period and we are able to link the individual information contained in the 2000 labour module to the prior histories of the individuals concerned. In this paper we do not exploit this depth as yet. Instead we will present different cuts across this data set. In particular we use the longitudinal component to reflect on changes in the population and in migration patterns and we use the cross-sectional component of the labour module to reflect on the labour market experiences in the year 2000.

1.3 Characteristics of the area

In 2000 the total surveillance population was 67 154 people living in 11 245 households, with a population density of 172 persons per square kilometer. The population is clustered in villages, the outcome of a forced villagisation process which occurred in the 1950’s and 60’s as part of the “homeland ” policy.

The male: female sex ratio for the total (de jure) population in 2000 was 0.929. The main ethnic identity is Shangaan, with some resident Pedi, Swazi and Zulu speakers. Mozambicans comprise more than a quarter (29%) of the total population. As noted above, these are immigrants with mixed legal status who came to South Africa as refugees in the late 1980's. Mozambicans are also Shangaan speaking and they are culturally affiliated to the South African host population.

There has been a notable reduction in fertility since the 1970s. A high rate of adolescent fertility exists in the midst of escalating HIV sero-prevalence. Work in Agincourt shows a previously undocumented bi-modal pattern of age-specific fertility, with pre-marital peak around age 18 and a marital fertility peak around age 27 (Garenne, Tollman and Kahn 2000b).

The main health problems revealed by verbal autopsy analysis are diarrhoea, kwashiorkor and AIDS in children under five; accidents, violence and AIDS in the 15-49 age group, and chronic degenerative diseases, mainly cardiac, cerebro-vascular, liver and malignant diseases, among those fifty and above. Seasonal malaria is also evident (Kahn, Tollman, Garenne and Gear 1999, Garenne, Kahn, Tollman and Gear 2000a).

Almost all villages have at least one primary school and fourteen villages have a secondary school. Over 40% of adults 25-59 years have received no formal schooling. Six percent have completed secondary school and only 3% have proceeded to some form of post-secondary education. Of those aged 15 -24 years almost all have attended primary school but only 46% went on to enter secondary school. Although 85% of 10-14 year olds were enrolled in primary school, age of enrollment is frequently delayed. Adult female literacy (56%) is somewhat lower than adult male literacy (62%).

Housing in the sub-district is of varying quality and ranges from modern brick dwellings with tin or tiled roofs to traditional mud huts. Usually a household occupies a cluster of small structures on a village stand. Stands are generally too small to support subsistence agriculture and crops grown merely supplement the family diet. Water shortage poses a serious problem in many villages, exacerbated by low infrastructure, low rainfall, and environmental degradation. Generally, water is pumped to reservoirs and reticulated to street taps, from where it is collected by women or children in 25litre drums and transported in wheelbarrows or on the head. Traditional wells and seasonal rivers are still a major water source. Levels of household sanitation are poor, and pit toilets of varying effectiveness are the norm. All roads are untarred. Public transport is limited to privately owned mini-bus taxis. Electricity and telephone services, though seriously lacking, are benefiting gradually from development initiatives.

A health centre with five satellite clinics exist in the field-site, all staffed by nurses. A restricted number of drugs are dispensed from each of these primary care facilities, and the health centre has a small laboratory, able to perform a limited number of diagnostic tests. An ambulance is based at the health centre. All services are free, and include child health, family planning, ante-natal care, delivery and post-partum care, minor ailments and chronic disease treatments. Although waiting times are long, most of these services are under-utilised. A

contributing factor is poor drug supply. Referrals are to two district hospitals, each about twenty five kilometers from the health centre.

2 Labour market transitions

In Figures 2, 3, 4 and 5 we present the distribution of individuals across labour market states by age and sex. The pattern revealed in these graphs are qualitatively very similar to pictures presented by Wittenberg (1999) on the basis of national cross-sectional surveys done in 1993,1994 and 1995 (reproduced in Figure 6). This shows the benefit of doing both a local and a national level analysis: the national picture gives one the confidence to generalise from the Agincourt specific findings, while the local, more detailed picture, allows one to validate and calibrate the national results.

Wittenberg argued that these graphs could be given a “flow” interpretation, that the peak in the number of the unemployed in the mid-twenties is due to the difference in two flows: the rate of flow out of the education system and the rate of flow into work. Figure 4 suggests that the rate of exit out of the schooling system is leisurely: about 40% of all twenty year olds are still in the education system. Leisurely as this pace might be, the rate of absorption into work is even slower, although it picks up in the twenties. Nevertheless by this stage there has been a build-up in the numbers of the unemployed. When the flows out of the school system stop, the level of youth unemployment begins to be mopped up by the transitions into work. Nevertheless as Figure 2 makes clear, the net rate of absorption decreases in the thirties and comes to a halt at about age forty. The peak is at substantially less than 100%. The fact that the proportion of the unemployed continues to decline suggests that at least some of this decrease is due to an increase in the number of people out of the labour force altogether (visible in Figure 5). This flow interpretation is valid only if the patterns of the distribution are reasonably stable, so that the processes among thirty-year olds today is a good approximation to what we might see among twenty-five year olds five years later.

This is clearly not entirely the case. The details of the patterns revealed in the Agincourt data are somewhat different to the details in Figure 6. Indeed, it would be strange if there were no differences: not only is there a five year lag between the last data set used by Wittenberg and the information presented here, but Figure 6 presents aggregate information on all areas (urban and rural). Furthermore even the “rural” figures presented in the original paper include all rural areas (i.e. also farms) across South Africa, whereas the Agincourt data is for one area only with its own peculiarities.

As far as the differences are concerned, the pattern of male and female labour supply depicted in Figure 2 differs from the distribution presented in the earlier paper in that the levels are higher. The previous work suggested that at the peak employment level only about 70% of rural men are working. The equivalent figure for women was 30%. There are some possible explanations for these differences. It is possible that the Agincourt data set was more successful

on picking up informal activity (on this see more below), particularly among women. Alternatively, it might be thought that part of the difference can be explained by the contribution of temporary migrants - 90% of all migrants between the ages of thirty and fifty-five are working (see Figure 7), although the cross-sectional data sets should have picked most of these up too. If we restrict attention only to people residing permanently in the Agincourt area then the employment rate is significantly lower than 70% (see Figure 8).

One puzzle which Wittenberg couldn't resolve on the basis of his data is illuminated by Figure 9. It is clear that most men experience some work at some stage of their life. There must therefore be some turnover in the labour market given that South African labour markets have not been operating at full employment for at least fifteen years. This suggests that longitudinal studies of the labour market, paying careful attention to forms of casual and seasonal work, may help to unpick South Africa's unemployment puzzle.

Interestingly enough, Figure 9 also provides evidence of significant changes in the labour force participation rates of women. It seems as though cohorts born until 1960 showed an ever increasing propensity to work. It is difficult to make any comments on developments since then, since younger cohorts would have faced a much weaker job market.

The pattern of search shown in Figure 3 also shows great similarities with the pattern found by Wittenberg. The Agincourt sample seems to exhibit a higher level of search behaviour than the aggregate rural sample in the earlier data sets. Part of the reason for this may be definitional: in the Agincourt labour module search was simply self-described, i.e. one did not have to evidence any concrete searching behaviour. If one adds the narrow and the expanded unemployment rates together in the earlier cross-sectional data sets, then one gets closer to the 30% of Figure 3.

There is again some heterogeneity. The rates of search (unemployment) among permanent rural residents is much higher still, as shown in Figure 10. This suggests more strongly that the "searching" category is simply capturing the sum total of all unemployment. If one considers temporary migrants, it is clear from Figure 11, that if they did not work, then they were looking for work, or (as indicated in Figure 13) they were schooling. This is not absolutely true for women, with about 10% of the unemployed migrating for purposes other than looking for work.

Differences in levels notwithstanding, it is striking that the peak level of search activity in Figure 3 is more or less where the earlier data had put it: at about age 27. Indeed even in the case of migrants, the peak is in the mid-twenties (see Figure 12). This suggests that the "flow" interpretation of these pictures is more plausible: that the peak at this age is produced by differences in the flow rates of individuals out of the schooling system and into different forms of work and that these flows change at around this age. It certainly does not seem like an artefact of particularly bad labour market conditions in the early nineties, with a "wave" of unemployed individuals washing through the system. In some sense this is also a hopeful conclusion, since it suggests that at least some of the individuals in this unemployment peak will still find their way

into employment. Some of the others will undoubtedly drop out of the labour market altogether.

It is interesting to note also that the shape of the aggregate unemployment curve for men is also very similar to the shape recorded in the cross-sectional data sets - a sharp peak, followed by a steady decline until about age forty, then a period of levelling off, followed by further declines in the fifties. The stability of this distribution (even allowing for differences in the levels) again suggests that the underlying flow interpretation is appropriate.

3 Patterns of work

If we focus attention on those in employment, we have graphed the geographical distribution in Figure 14. It is clear that the permanent residents of Agincourt tend to work in the immediate vicinity. Temporary migrants tend to be employed in a belt stretching from Mpumalanga, along the N4 towards Gauteng.

The types of activities undertaken by migrants (Figure 15) and permanent residents (Figure 16) are very revealing. Perhaps the most startling revelation of all, is how important informal selling is in the lives of working women. It is the largest single category of work for both temporary migrants and permanent residents. Interestingly enough, farm work also seems to have become more of a female occupation, supporting Casale and Posel (2001) contention that parts of the labour force are becoming feminised. Within Agincourt itself, however, very few people are engaged in farming activities. Indeed as Figure 17 indicates, the proportion of the overall population engaged primarily in subsistence farming is very small. Interestingly enough this is also largely a female occupation.

To some extent the importance of subsistence activities will be underestimated, because many households will supplement their income with maize and fruit grown in their garden. It does, however, highlight the fact that many of South Africa's rural areas are not "rural" in the way the development literature in the rest of the world conceives of the term.

Focusing on the "male" occupations, it is clear that mining is still important, although perhaps less so than it might be in other rural areas (such as Lesotho) or than it might have been in the past. The largest source of work within the area itself was in construction. Some of this may have been related to the RDP housing project, although there are also other more informal construction activities occurring in the area.

4 Demographic shifts and changes in migration

There have been some large demographic shifts in the area. As noted above, the total fertility rate declined rapidly from around 6 in the early 1970's to its present level of around 2.8 (Garenne et al. 2000b). This has led to a marked change in the age structure of the population, with a reduction in the number of very young children. Part of this reduction in the late nineties is probably

also due to the spread of AIDS.

In other work in progress (Collinson and Wittenberg 2001) we show that this reduction has been accompanied by a reduction in household size, with the modal category having almost one person per household less in 2000 than in 1992. In part this is also due to what seems to be an increase in the rate of household formation. Some of this is perhaps due to new opportunities that have opened up since the democratic transition, particularly in the process of allocating land within the rural areas.

Interestingly, our work also suggests that household structure is not becoming “simpler” with the reduction in household size. If anything, there seems to be a change towards having more distantly related individuals co-residing and more generations within a household. Some of this may be due to families taking in AIDS orphans, although we have not been able to establish this thus far.

Concomitantly there have been some noticeable shifts in the patterns of temporary migration (see Figures 18 and 19). The marked upturn in female migration after 1997 is especially noticeable. It is possible that the changes in fertility and in household structure may have freed women to become more active in the labour market. Of course it is also possible that economic distress may be the driving force, along the lines of the “added worker effect” (Lundberg 1985).

It is also interesting to note the dip in male migration among younger men in the mid-nineties. This may reflect worsening labour market conditions at the time, perhaps related also to the large-scale retrenchments in the mining sector. The recovery in the late nineties may be due either to an improvement in the economy or to a repositioning of male migrants in the economy.

Clearly these reflections are not yet based on rigorous work. Such work remains to be done, but the Agincourt data set at least promises to provide a lens through which the interactions between local changes in household structure and land tenure and the migration responses of individuals can be examined.

5 Conclusion

This paper has been largely descriptive, but some suggestions have been made how the information contained in the Agincourt data set might throw light on broader processes operating within the South African labour market.

Reviewing the evidence thus far, it seems clear that rural South Africans have responded to the changes introduced by economic and political reforms in the nineteen-nineties. This response is most visible in the case of the migration of women. At the same time, it seems as if the women are firmly positioned in the informal part of the economy. It is less clear, however, whether these kinds of adjustments will lead to an alleviation of poverty in the long-run.

We have also shown that the data set can help to throw light on the validity of national level analyses. It is clear that the national information and the local information paint a broadly similar picture: that the distribution of unemployment is to some extent age-specific. What determines the rate of absorption

of young men into the economy is, of course, an issue which our data does not resolve.

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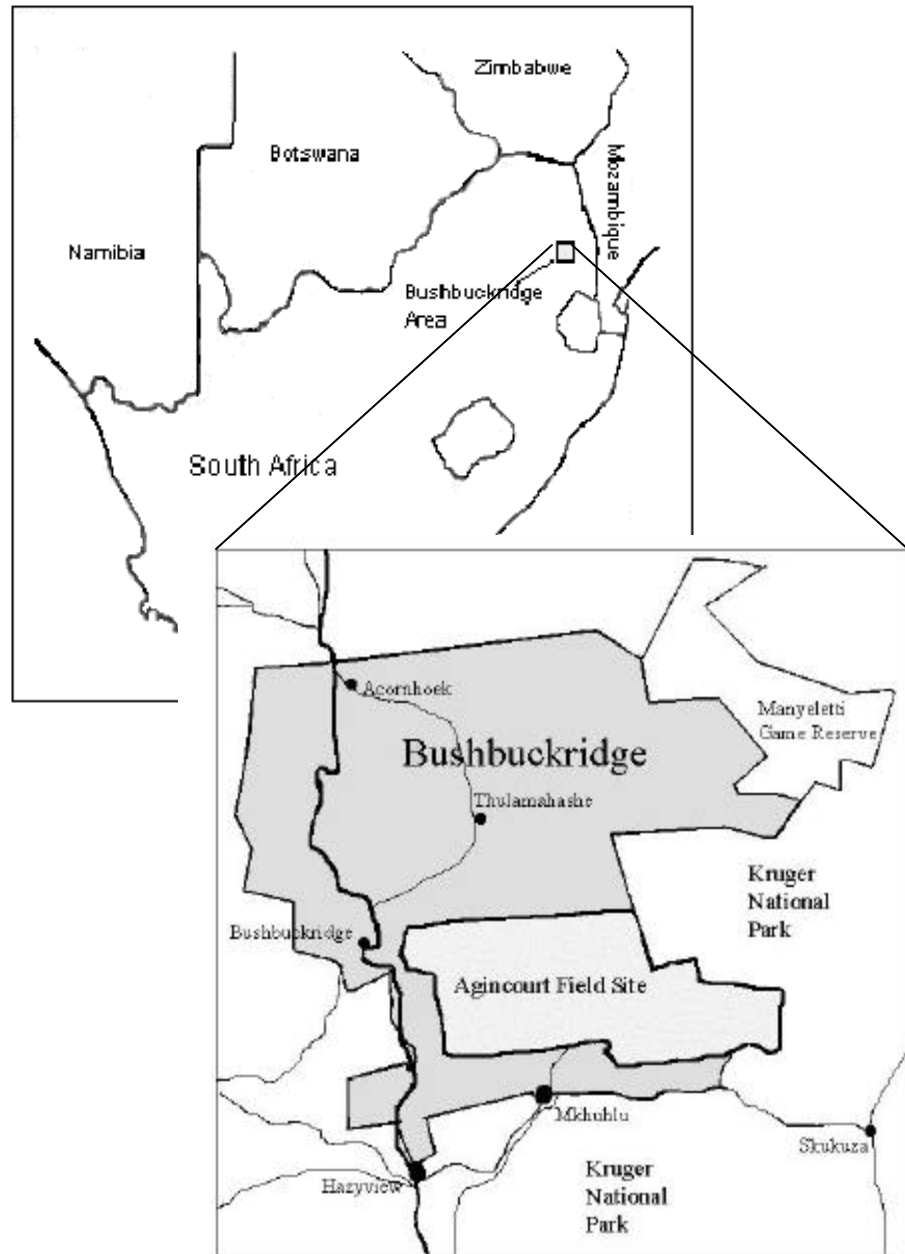


Figure 1: The Agincourt field site covers 21 villages in the Bushbuckridge area



Figure 2:

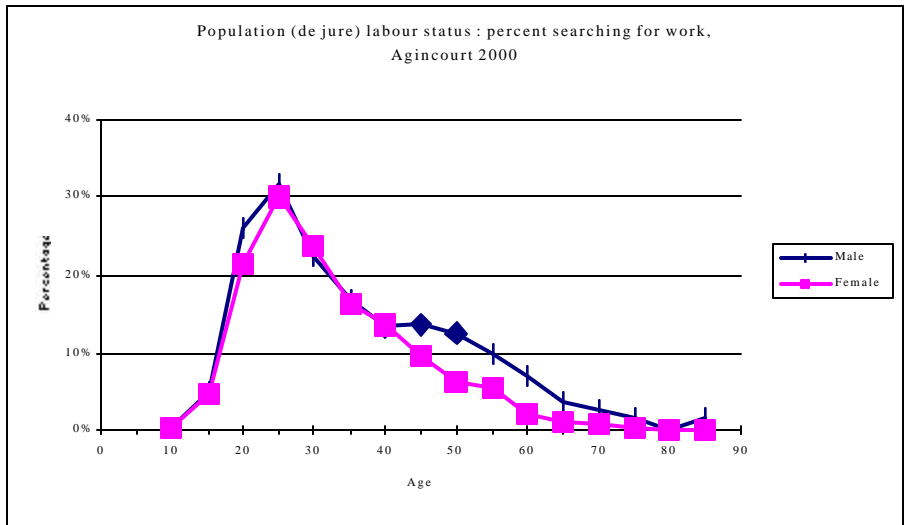


Figure 3:

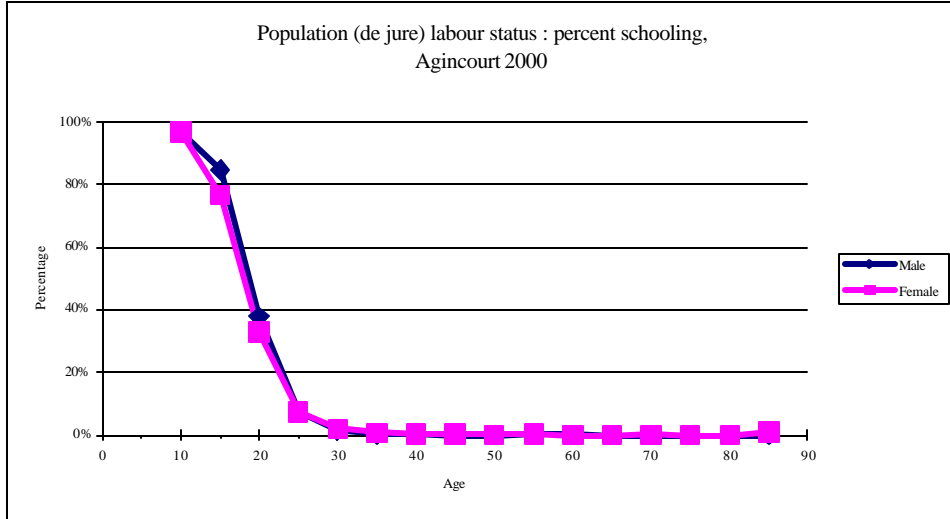


Figure 4:

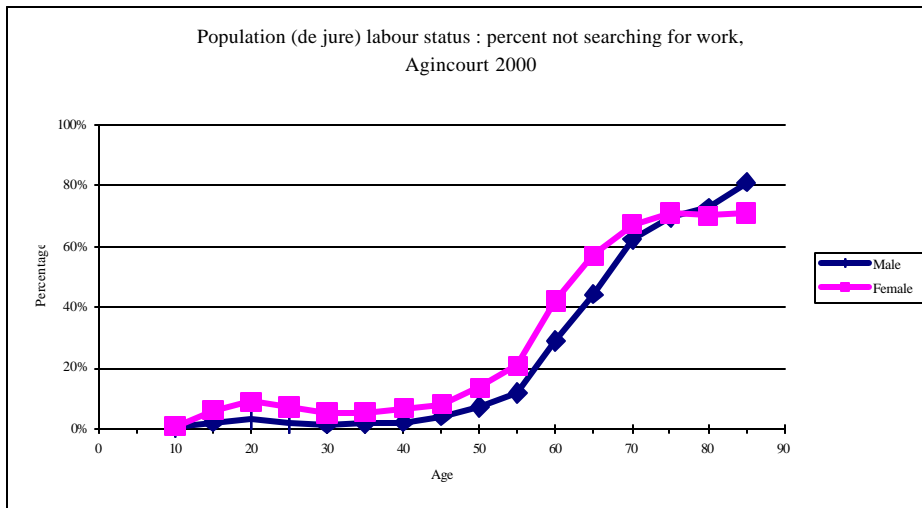


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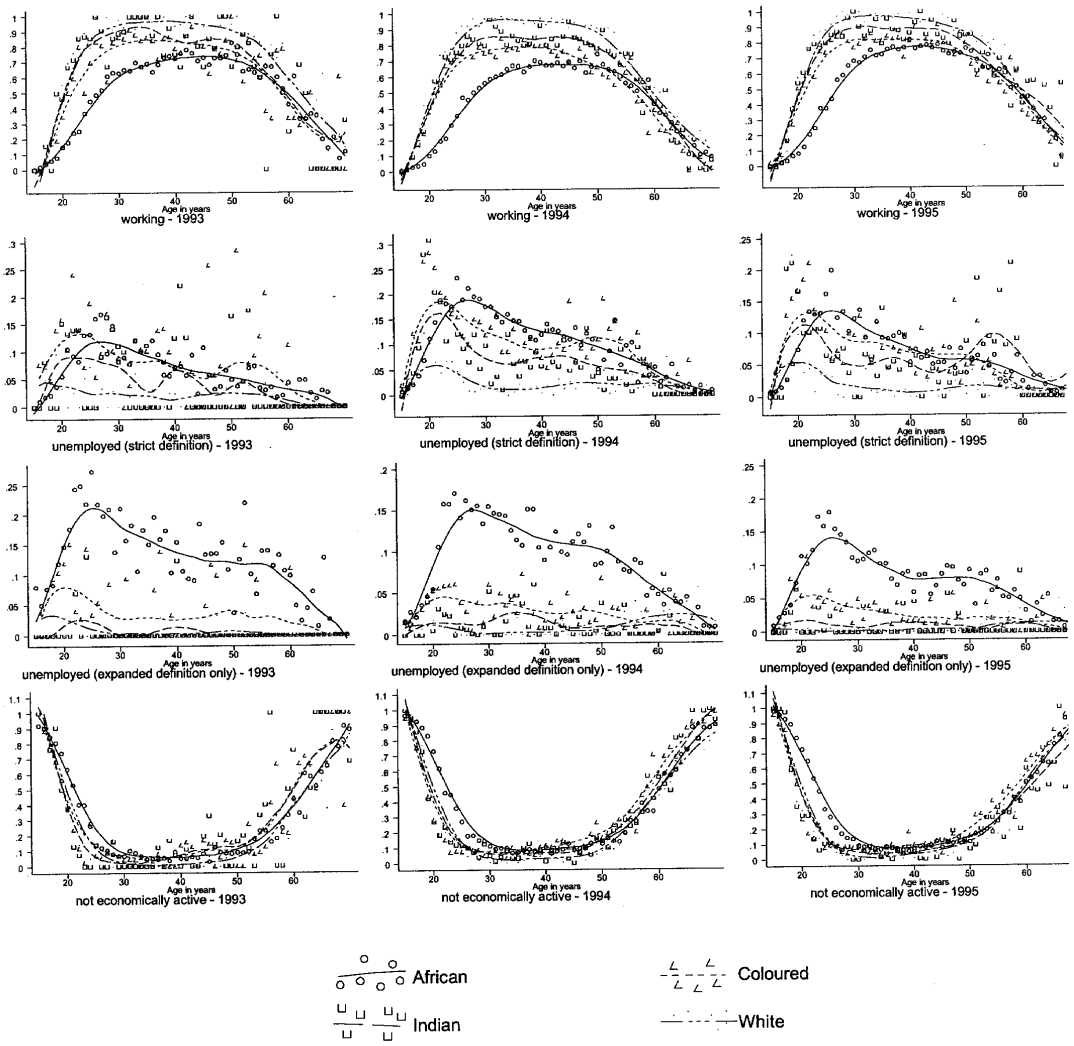


Figure 6: Labour market status of men

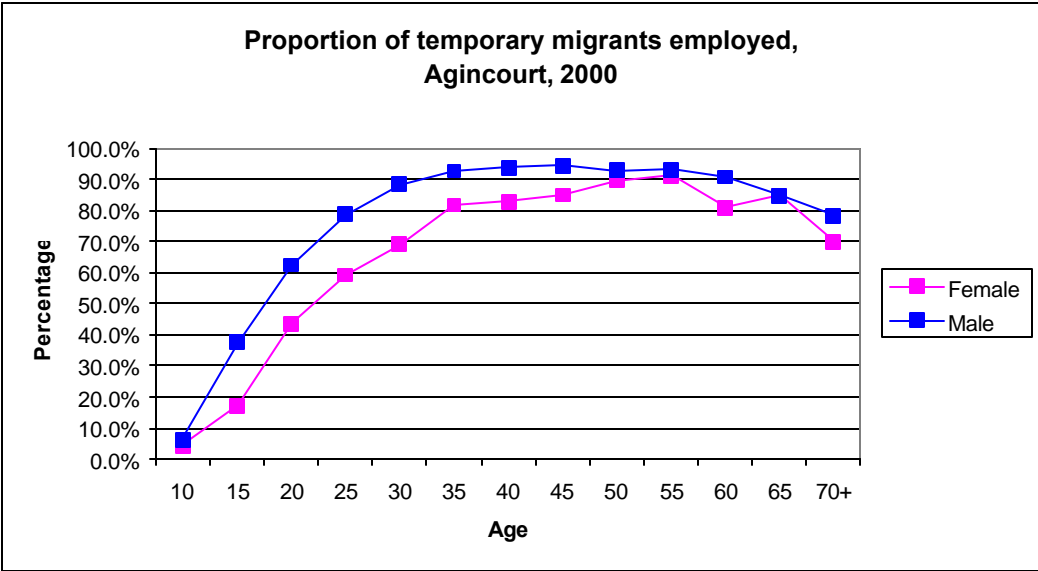


Figure 7:

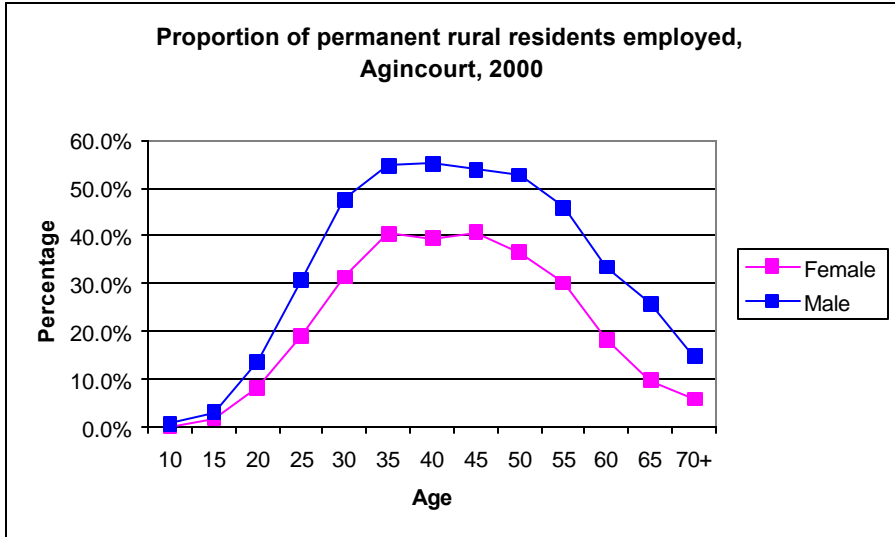


Figure 8:

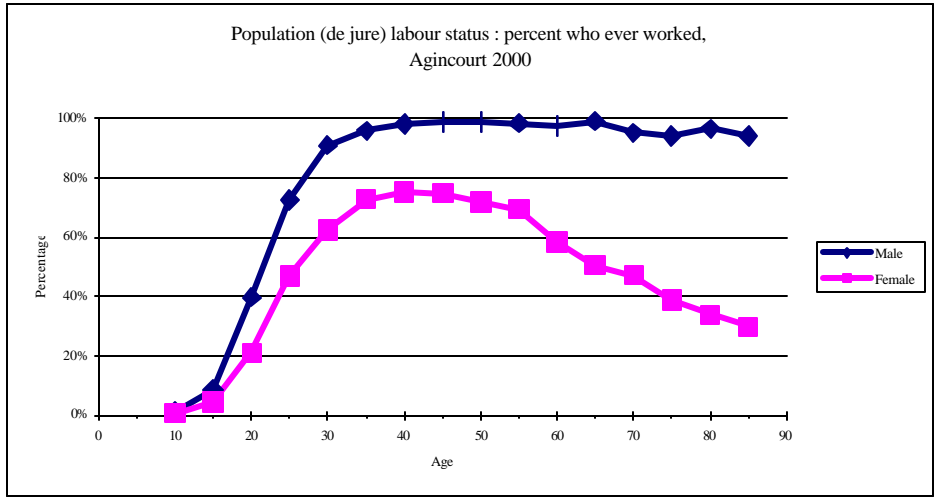


Figure 9:

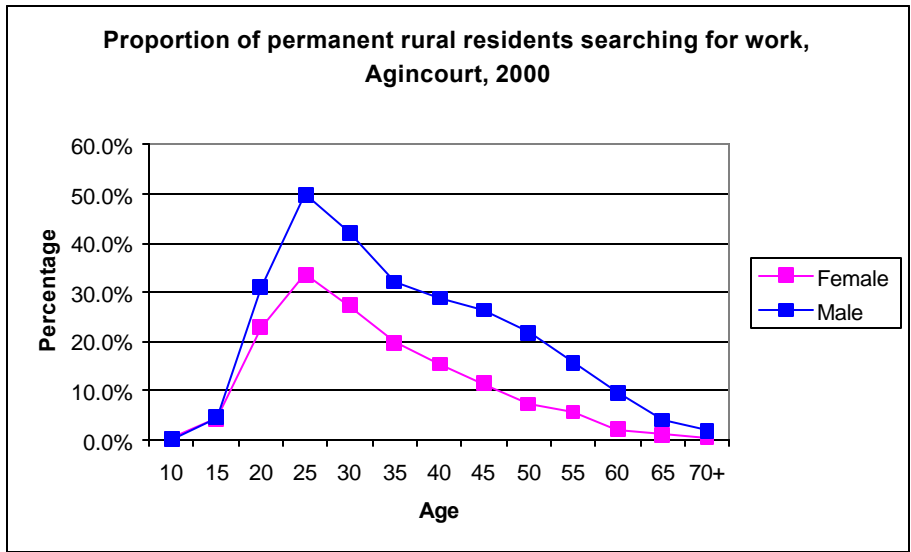


Figure 10:

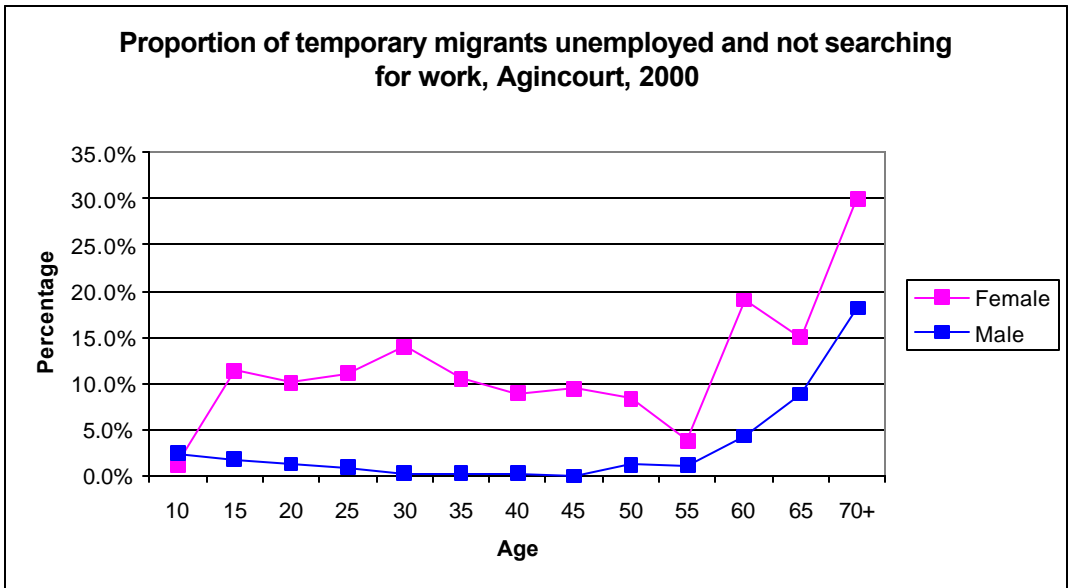


Figure 11:

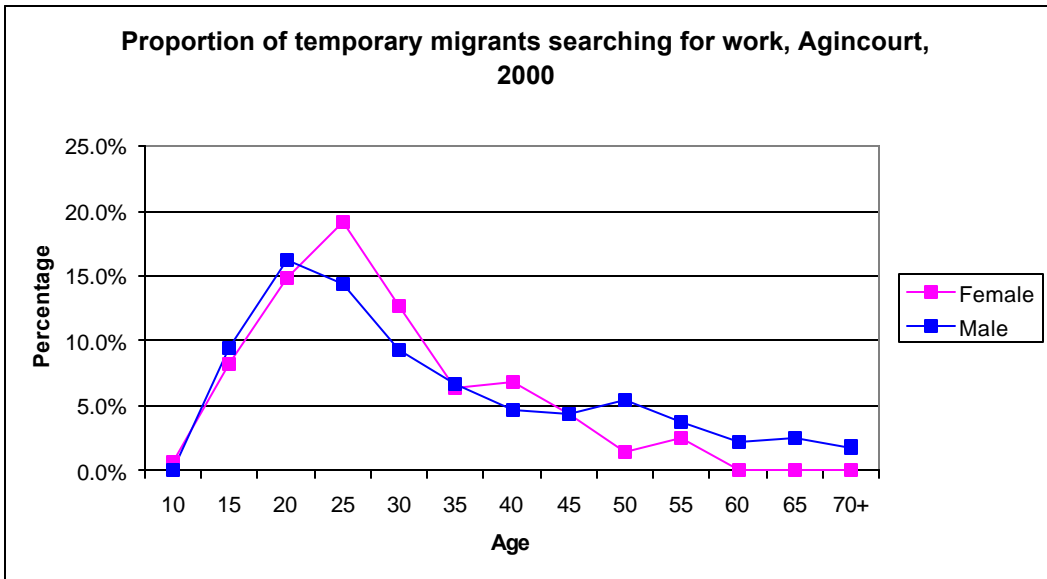


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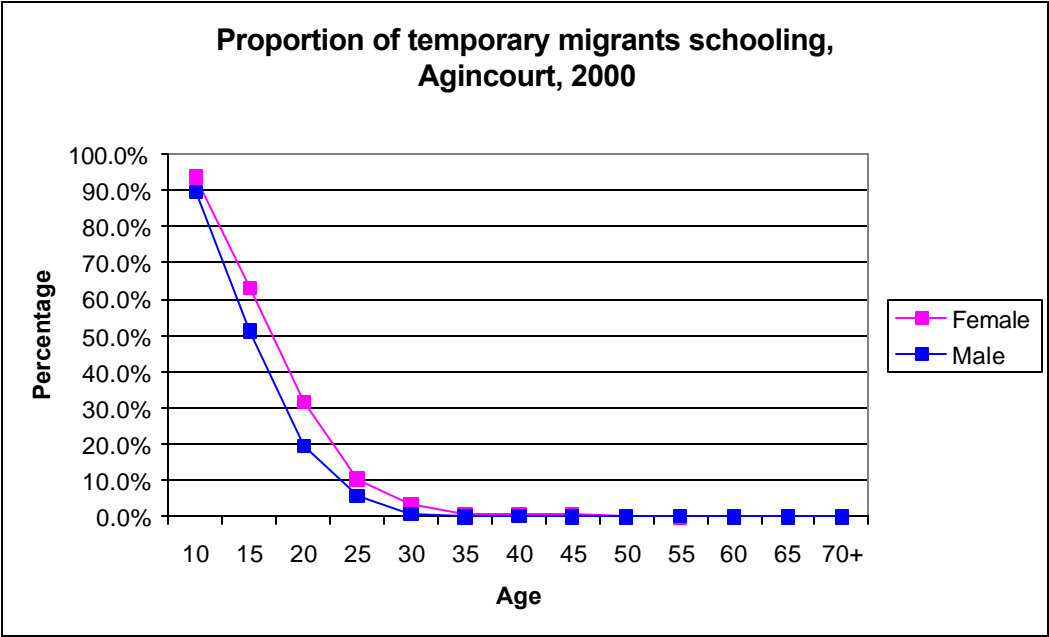


Figure 13:

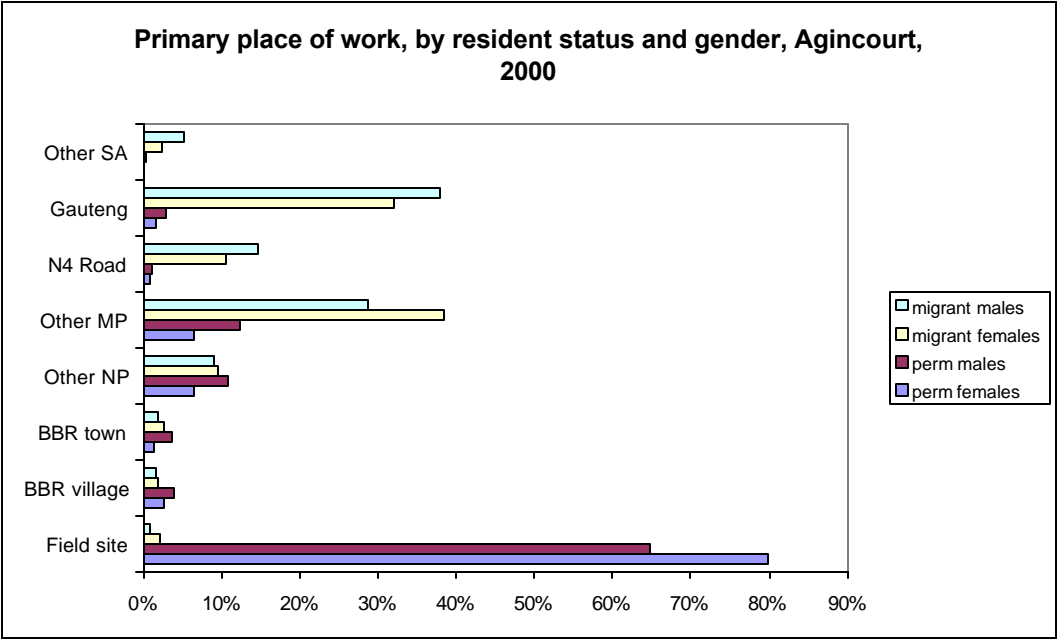


Figure 14:

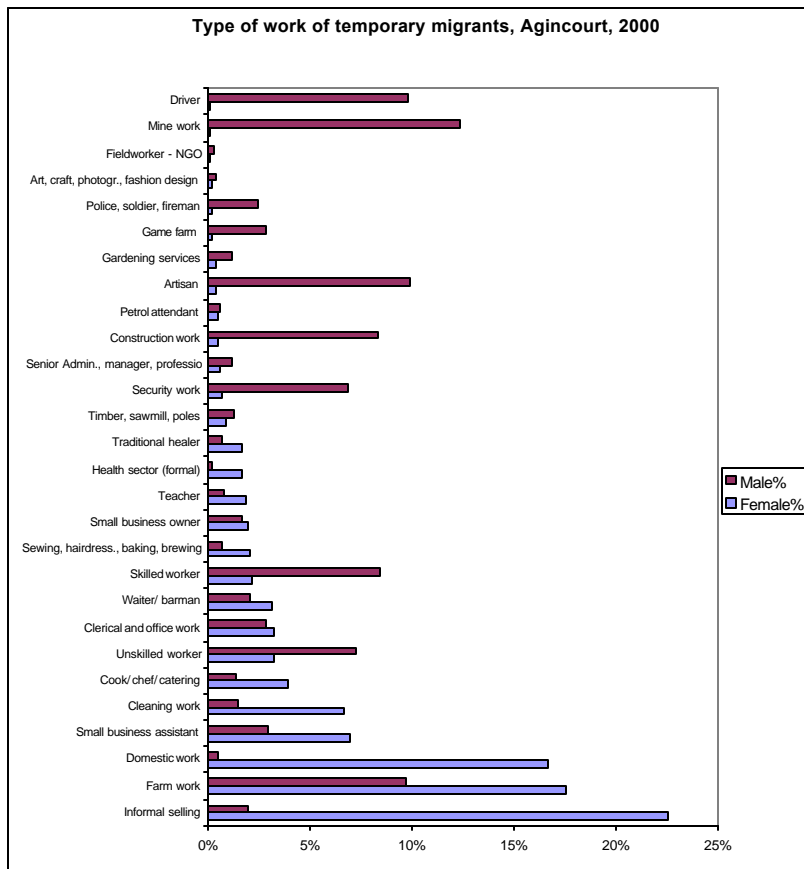


Figure 15:

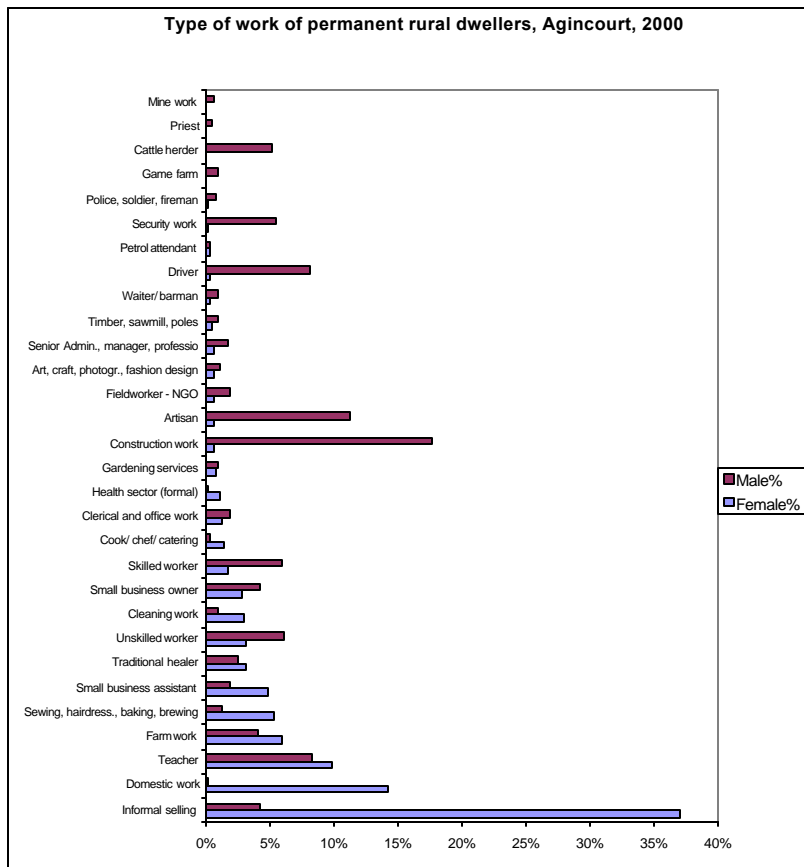


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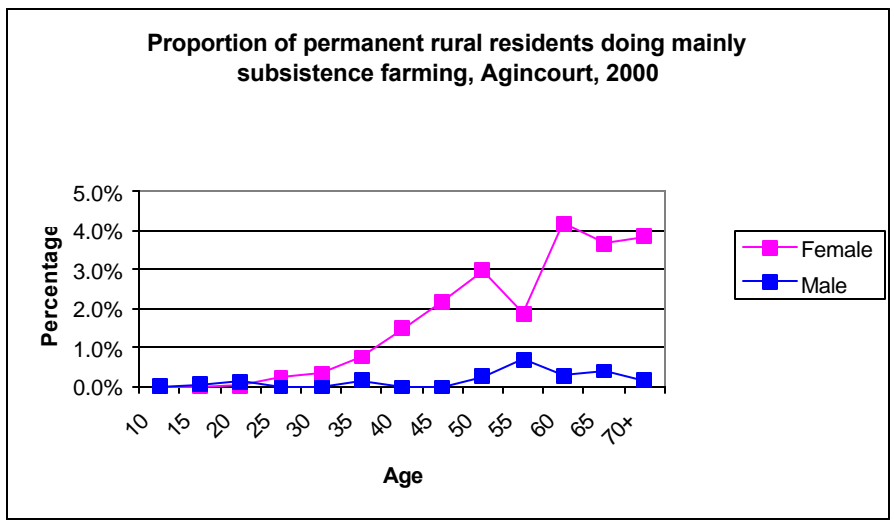


Figure 17:

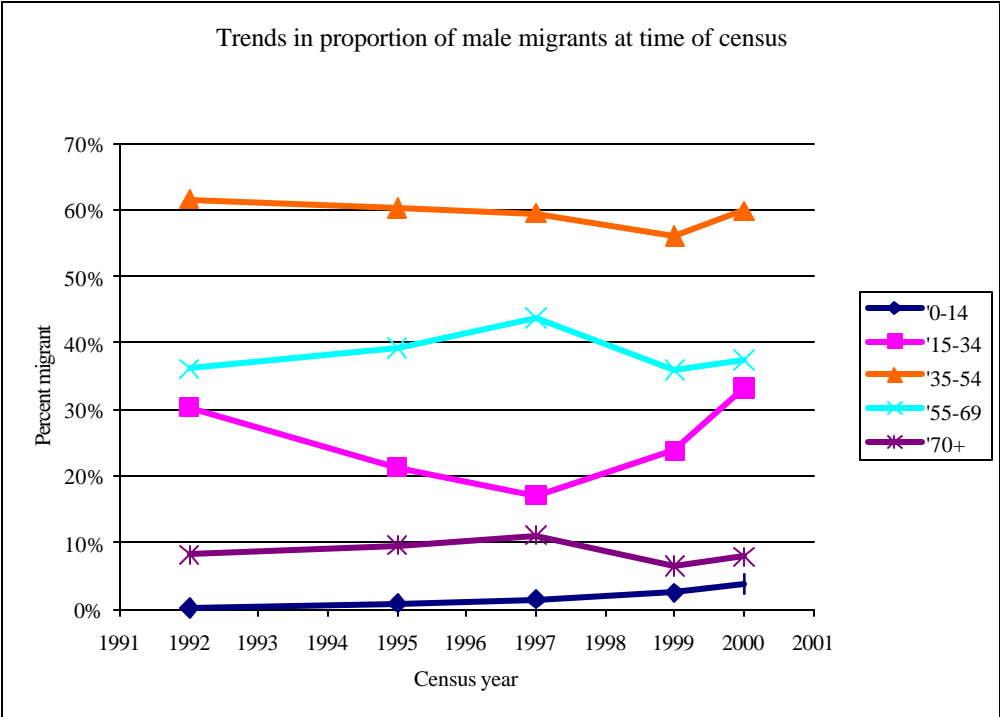


Figure 18:

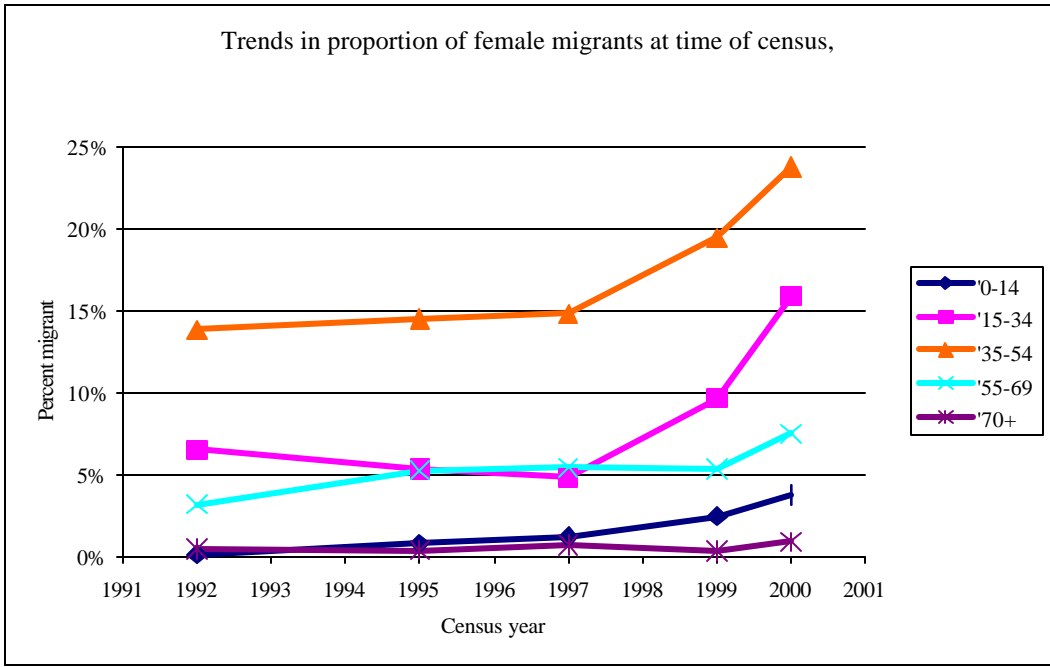


Figure 19: