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ASIA RESEARCH CENTRE WORKING PAPER 46

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ABSTRACT

As India integrates into the global economy, its villages are integrating into a rapidly growing urban economy. One of the links through which this is happening is labour markets, where demand for labour to undertake non-farm jobs has been growing. This has led to a rise in the share of non-farm incomes in total income. These jobs often take people out of the village to engage in labour markets in nearby urban/semi-urban centres. The village of Palanpur is an illustration of a similar trend and we delve deeper into understanding what has led to the rise of non-farm incomes for the last 25 years. An important first step in this endeavour is to understand how villagers allocate time among different job activities and how non-farm activities takes them out of the village. In this paper, we take this first step by examining trends in employment outside the village of Palanpur over the period 1983-2008. We classify activities as primary and subsidiary on the basis of the amount of time spent doing them. We find that, compared to 1993 and 1983, a higher proportion of the adult male labour force works outside the village in 2008. The key driver of outside work is subsidiary jobs that last for short periods of time. Somewhat surprisingly we find that the share of people who work outside the village as a primary occupation has not risen since 1983. This can be understood, however, as part of a process of selective migration. We find evidence, for example, that people who held regular jobs outside the village in 1983, have migrated out in disproportionate numbers. Further scrutiny reveals that there has been a rise in self-employment and non-farm casual labour; activities that take villagers outside Palanpur on a short-term, often daily, basis. We also find that land ownership is an important determinant of working outside the village and that the structural link between land and employment has not changed over time.

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[@] I wish to thank the Asia Research Centre, London School of Economics who hosted me for two summers in 2009 and 2010. Further I wish to thank the Institute of Economic Growth who funded me as a visiting fellow and allowed me to work on this interesting paper. I am also indebted to my field co-researchers Gajananad, Hemendra and Dinesh and to my research assistant Siddhartha Gupta without whose diligent effort this paper would not have been possible. I would also like to thank Peter Lanjouw, Himanshu and Nicholas Stern for helpful comments. The usual disclaimers apply.

INTRODUCTION

During the last two decades, the non farm sector in rural India has been growing steadily. NSS data reveal that, "over the…period, 1983 to 1993-94, the average annual growth in non-farm jobs was…over 2%. Between 1993-94 and 1998-99, this increased to 3%, and from 1999 to 2004-05, this increased again to 4%" (Himanshu et al 2010). Alongside employment growth, non-farm incomes have also been rising over time. These developments offer the hope that the growing non farm sector will accelerate rural poverty reduction.

The growth of rural non-farm incomes indicate that there is, now, a greater demand for labour outside agriculture. For example, the growth of the construction sector has led to an increase in demand for construction workers, masons, marble polishers and brick-kiln workers. These have led people living in villages to seek and successfully find jobs outside the village. The increasing demand for non-farm casual labour has meant that those without education or with low land ownership may now have a greater chance at getting more remunerative jobs than before.

Over the past 25 years, trends in Palanpur are similar to those observable at the all-India level. There has been a rise in the share of total income that comes from non-farm activities. Since the major source of such non-farm income has been from employment (as opposed to remittances or transfers), it is important to step back and look at the occupation profile of the village and how that has changed over the years.

The village of Palanpur is located on a railway line between the busy urban centre of Moradabad and the smaller rural town of Chandausi. Access to either of these urban centers, as well as other neighbouring villages, is relatively easy given the ready access to and ease of railway transportation. It is likely therefore that any trend rise in non-farm employment among the village residents is linked to an increase in the proportion of residents who travel outside the village for their employment. Such outside employment activities range from daily commuting to nearby towns/villages to short visits to nearby states. In this paper, we look at trends in employment outside the village and explore their determinants. In doing so, we investigate whether non farm employment is a consequence of push factors like falling land ownership (as has

been contended by some (Ranjan 2009)) or alternatively, due to accumulation of capital (including information networks), the formation of skills or a secular increase in the demand for non-farm labour.

Palanpur has been the subject of close study for over 5 decades (Bliss and Stern 1982, Lanjouw and Stern 1998: referred to as LS 1998 from here on). Data are available for households from 1957 to 2008 on an almost decadal basis (1957-58, 1962-63, 1974-75, 1983-84, 1993 and 2008). In this paper we seek to use individual level data for the years 1983, 1993 and 2008. The dataset, especially for 2008, is rich in that it includes information about all activities people do over the year. Moreover it has information on whether (and where) people go out for work. In the case of businesses, we have information on fixed capital expenditures and an estimate of variable costs and the profits. In the case of casual non-farm activities, we have information on the job search process and how many days people seek work and how many days they get work. Of course, the greatest asset of the dataset is that we have the history of all households over 5 decades (and for all members over the last 25 years). In this paper, we use a fairly small part of our overall dataset: we look at the various activities performed during the year and whether the activity takes villagers out of Palanpur, as well as some important household and individual characteristics. We also take into account migration of members from 1983 onwards. This additional dimension brings out the strength of this dataset and shows how crucial such data can be in understanding temporal changes.

Using data for 1983, 1993 and 2008, we scrutinize the structural relationship between engaging in non-farm work outside the village and household/individual characteristics. Further we examine if these relationships have changed over time. If they haven't, are the observed trends then due to changing levels of the state variables? For example, does low land ownership make more people undertake non-farm work now or do we observe a stronger connection between land ownership and non-farm work simply because average per capita landholdings have fallen over the years?

In this paper, we also take into account the possibility that access to non-farm work may differ across different castes. This possibility was already investigated in earlier studies. For example, LS (1998) observed that in 1983, a large proportion of

jobs undertaken outside Palanpur were regular jobs. These required connections and were therefore concentrated among particular castes. Using data for the three periods, we investigate if some castes have a disproportionate advantage in getting certain jobs and how this advantage has evolved over the span of twenty five years.

A crucial requirement in studies that aim to improve understanding of how individuals' occupations have changed over time is that there should not be a systematic attrition bias. For example, as we will show in this paper, if in the past individuals from a particular community had greater involvement in outside jobs and if this also made them more likely to migrate, then those left in village from this community may be a selected sample of individuals with steady jobs in the village (or individuals without the requisite education/connections to get certain kinds of outside jobs). This may lead us to make the wrong temporal conclusion that the community now behaves differently. In fact, if initially, this community had a large share in the pool of those going out, then due to their migration, it may appear that those who remain in the village are less likely to go out. We investigate this dimension of the problem by incorporating information on migration over the years 1983-1993 and 1993-2008. Long-term migration reflects a more drastic response to either the supply side pressure or a demand side attraction. Much in the same vein of earlier analyses, we investigate if structural relationships between supply side factors and migration have changed over the decades and whether prior experience of working outside matter for migration decisions.

The sections are organized thus: In section 2.1, we look at some of the stylized facts about the employment of Palanpur adult men over the various survey years. Section 2.2 looks at the determinants of working outside while section 2.3 examines the covariates of working out by each activity. In section 3.1 we investigate some stylized facts about migration flows. We delve into the determinants of migration in section 3.2. Section 4 concludes the discussion by summarizing the results and offering general remarks.

2.1 EMPLOYMENT OF PALANPUR RESIDENTS OUTSIDE THE VILLAGE

Working outside Palanpur is intrinsically linked to occupational choice. Some occupations, such as construction work, portering, masonry and marble polishing, are oriented towards a market well beyond Palanpur. These are largely carried out outside the village. On the other hand, cultivation is undertaken entirely inside the village. Hence we start off by looking at snapshots of occupations (broadly classified) held by village residents. We focus on adult males aged 15 and above[1]. Table 1 compares the primary occupations over the years. We define primary occupation as that activity in which a person spends most working time during the last 365 days[2]. The list of activities includes leisure (being out the labour force), being a student/apprentice or looking for a job (unemployed).

It is important to note that we have two options in terms of what base to consider when reporting occupational shares. One option would be to report the share of each occupation category as a proportion of the adult (15 and above) male population. Another possibility is to report the shares with the members in the labour force as the base. In 1983, 89 percent of adult males were in the labour force while in 1993 84 percent of adult males were in the labour force. In 2008, 82 percent of adults were in the labour force reflecting the growing importance of education among young adults. We will mostly report our results with the adult male population as the base since we want to look at determinants of choice. Not entering the labour force is endogenous and in order to avoid biasing our results, we consider the whole adult male population. The flavour of the arguments does not change greatly if we consider the labour force as the base.

As can be seen in Table 1, there is a fall in the share of people who are cultivators and who take care of livestock (who work in the village) over the period 1957-2008. While this is largely consistent with the general sectoral shift of labour out of agriculture in India as a whole (see, for example, World Bank, 2011), the modest drop between 1983 and 2008 seems to indicate that the movement towards non farm in recent years, if any, is not led by a large drop in cultivation as a primary

[1] As explained in LS 1998, this is largely done because women's participation in outside labour market is limited.

[2] Alternatively, we could have also classified primary occupations on the basis of their share in total income.

activity. While 49 percent of adults were primarily focused on cultivation in 1983, this was only slightly lower, at 48 percent, in 2008. The other farm activity is casual agriculture labour. A breakdown of casual labour (Table 2) shows that agriculture labour has almost disappeared as a primary occupation by 2008. Taking the two farm activities together, we find that while farm activities account for 53 percent of the total adult population in 1983, they account for 48 percent of the adult male population in 2008. This share is much higher at 60 percent in 1993. Keeping in mind that some males do not participate in the labour market, we find that while 36 percent were engaged in non farm activities in 1983, the shares were 24 percent in 1993 and only 32 percent in 2008[3]. Therefore, while there has been a substantial increase in non-farm employment shares since 1993, over the longer-run between 1983 and 2008, there has been, on balance, a slight fall. The decline in the non-farm share between 1983 and 1993 had been remarked on in LS (1998) and was largely explained by the loss of regular jobs due to the closure of a cloth mill nearby. While there was some recovery between 1993 and 2008, the rise has not been large enough to offset the fall in the earlier period. As we will see later, however, this is only part of the explanation.

Let us now look closer at the non-farm activities. The bulk of non-farm jobs come from three major classes of activities: Wage Employment (including regular and semi regular jobs), Self-Employed (skilled and unskilled business)[4] and non-farm casual labour. Over the last 25 years, there has been a shift in the mix of the three activities. While wage employment accounted for the bulk of non-farm activities in 1983, this declined in 1993 and had then fallen further by 2008. As noted above, LS (1998) explain the fall in 1993 levels as a consequence of shut down of a factory that had employed a relatively large number of regular and semi-regular workers from Palanpur. However the share did not recover after 1993 (though the number of wage employment jobs between 1993 and 2008 are more or less similar). Indeed this detail is important to an understanding of why the share of non-farm activities are not as high in 2008 as in 1983. But we will come to this in more detail later. Suffice to

[3] As a proportion of the labour force, the proportions are 58 percent in 1983 and 57 percent in 2008.

[4] There are 2 cases of mechanized farm activity that have been put in cultivation so as to be consistent with the definition of self employed in earlier years where self employed was seen as entirely non-farm.

note here that the greatest fall in wage employment over time is due to the decline of unskilled regular jobs.

The component of non-farm employment that has shown the greatest rise over time is self-employment. There is a 6 percent increase in 2008 from 1983 or 1993 levels (Table 1). This is primarily due to the rise of marble polishing and opening up of motor repair shops as business enterprises. The rise of self employment in rural India has been documented by others (Ranjan 2009, World Bank 2011) who have debated if this rise is due to push or pull factors. We will look at this in more detail later but at first glance, the activities mentioned above do not seem to be endeavors of people pushed into a corner. Rather they may represent the outcome of a process of capital formation (like acquisition of marble polishing machine) or training (like learning how to repair engines). Moreover, they also represent an increased demand for such services. For example, the growth of marble polishing can be linked to increase in construction around Moradabad, that make such capital investments by the villagers worthwhile.

As noted before, those involved in casual labour in 2008, are almost exclusively engaged in non-farm activities. While non-farm activities only represented 56 percent of total casual labour activities in 1983, by 2008 94 percent of casual labour activities in 2008 were in the non-farm sector (the percentage in 1993 was 53). These constitute daily commuting to the brick kiln, portering jobs at the Moradabad station ("malgodaam") or working for people who own marble polishing machines. The growth of these activities again point to the increasing demand for casual labour in non-farm activities.

So far, we have been treating non-farm activities synonymously with working outside the village. However, not all non-farm work is outside the village and since the activities that come under each of these classifications is changing over time, it is important to keep in mind what proportion of activities in each category is conducted outside Palanpur. Table 3 summarizes the proportion of outside work from amongst those activities that have some non-farm content. While the rise of the outside work within casual labour reflects the rising importance of non-farm casual labour (note though that not all non-farm casual work is outside the village), the rising proportion of self employment that occurs outside the village reflects the rise of marble polishing

machine owners. Wage employment outside the village has more or less remained stable since 1983.

Given the proportion of the adult male population in various activity categories and the share of outside work in each of them, we are now ready to look at the evolution of the population shares that work outside (Table 4a). In 1983, 28 percent of adult males worked outside the village, declining to 19 percent in 1993, and subsequently rising back to 23 percent in 2008. While there was a rise compared to 1993, the percentage of adult males working outside the village in 2008 is still lower than was observed in 1983[5].

To understand better this decline, let us look more closely at the specific activities of those who work outside the village. Table 5 reveals a clear decline in regular jobs. While regular unskilled jobs contributed as many as 49 percent of total jobs outside in 1983, their share amounted to only 16 percent in 2008. Moreover there is an absolute decline in the number of such jobs. Why did this happen? Answering this may lead us to understand better why Palanpur does not show rising employment outside the village in 2008 as compared to 1983. And we may also obtain a clearer grasp of why the non farm sector in Palanpur does not seem to show a emphatic rising trend over the last 25 years.

Before we get into this deeper, however, there are other ways in which Palanpur may have become more dependent on the outside world for employment. It is possible that while the males in Palanpur are not more likely in 2008 to go outside the village for their primary work than in earlier years, they may do so for their secondary/subsidiary work. It has been contended (Himanshu et al 2009, World Bank 2011) that there has been a diversification of activities in rural India. As Table 2 shows, compared to the earlier years, there are more people who do either self employed or non farm casual work as a secondary activity in 2008 than in previous survey years. In many cases, such diversification may lead to visits outside the village, some even as far as Delhi and Punjab for short term seasonal work. To capture this phenomenon, we calculate the proportion of adult population that has gone out of the village for any work in the last year (Table 4a). Table 4a reveals that

[5] As a proportion of adult male labour force, the percentages for 1983, 1993 and 2008 are 32, 24 and 32 percent.

while 33 percent of the adult population go out for some work in 2008, only 25 percent of the population went out in 1993, but as many as 34 percent went outside the village in 1983. These statistics are influenced by what we take as the base population. To compare, Table 4b presents the proportion of the labour force that has gone out of the village for *any* work during the last year. Using this measure over the period of study, we see that amongst the working labour force, there has been a 4 percent increase in villagers working outside Palanpur between 1983 and 2008. What are these secondary activities that people go out for? In Table 6, we tabulate the occupation profile of outside work. For each of the survey years, we find that it is mainly non-farm casual work that engages additional workers. This can be seen from a comparison of Tables 5 and 6, where it is casual labor that rises most as a share of activities.

Tables 7a, 7b and 7c provide details of the caste-wise proportion of adult males who are in each activity in 1983, 1993 and 2008 respectively. One of the biggest changes since 1983 is the fall in proportion of each caste engaged in regular wage employment. This reduction is largest for Thakurs and Others (which includes Passis).[6] Thakurs show a 12 percentage point decrease in regular wage employment whereas the castes comprising the category "Others" record an even larger fall of 25 percentage points. The picture is reversed somewhat when we focus on the narrower period between 1993 and 2008. During this interval there is a slight increase in regular employment for both castes, but the rise is very small.

Muraos also show a slight decline over time too but on the whole they remain the most stable of the castes in terms of occupation structure. Muslims (Dhobi/Telis) show a rise in skilled self-employment (largely motor repair shop owners) while showing a decline in casual labour. On the whole they do more non-farm work than before. The most interesting occupation profile change is for the Jatabs, who have moved out of casual agricultural labour as a primary activity. They show a marked increase in casual non-farm work. But at the same time Jatabs also reveal a rise in cultivation (consistent with the general observation that Jatabs are leasing in more land in 2008). Since non-farm jobs have higher incomes than agriculture casual labour activities, this reflects a rise in income for Jatabs over time. This can be seen

[6] The groupings follow the classifications followed in LS 1993 for similar tables.

as an example of the Indian growth process, with its greater demand of non-farm labour, leading to greater prosperity for the lower castes.

Given this occupation profile of the village, how many in each caste go out of Palanpur for their primary work? In 2008, Gadarias and Telis were most likely to work outside. This is in contrast to 1983 and 1993. In 1993, the two castes most likely to go outside were Dhimars and Passis; while in 1983, the two castes with the largest proportion of people going outside were Passi and Others.

Are people from within a caste more likely to go outside in 2008 than 1983? Clearly the Thakurs are working more outside Palanpur. This is equally true for Telis. Other castes show slight declines. But the most astounding statistic is the proportion of Passis going out of Palanpur. Notice two important details in Tables 7a-7c. First the proportion of Passis going out of Palanpur in 2008 is zero. Second the number of Passis in the labour force is just 7 in 2008 as compared to 26 in 1983. This is part of the answer to why a greater proportion of the village does not go outside for jobs. Given that Thakurs and Telis are a significant group in the village and that the proportion of them going out has risen by 8 to 10 percentage points each, one might have expected the village as whole to have shown a higher proportion of people going out. However, the loss between 1983 and 2008, of a community whose members worked outside has dampened considerably the overall village proportion. This is a classic case of selective attrition that can distort verdicts based on cross sectional averages. How much does the disappearance of the Passis contribute to the pool of those who go out? Table 8 shows the evolution of caste composition of those who go out of Palanpur for their primary work. Males from the Passi community constituted 20 percent of the adults that went out for their primary work in 1983. In 1993, this proportion had fallen to 11 percent. As pointed out above, there were non from this dwindling community that go out in 2008. Lastly, notice that Telis and Jatabs show an increased presence in this pool in 2008 and we will come to them later.

To get a rough idea of the impact of Passi disappearance from the adult male population, let us re-calculate the proportion of those working out excluding the Passi community for 1983 and 2008. Now the shares of those who work outside are the same (24 percent). If we consider the labour force as the relevant base, we find that the proportion of those working out for their primary work is 28 percent in 1983 and

30 percent in 2008. This is now a modest rise instead of a fall. However, this is merely for illustration. A similar sample selection argument can be made more generally if households/members working outside in 1983 have migrated out of the village. We look at this later when we look at migration in more detail.

Our results already suggest that if we consider the labour force, there is an increase in going out for some work over the years. Moreover, if we drop the Passi community from the population, the difference between 1983 (35 percent) and 2008 (43 percent) becomes even larger. Interestingly, when one compares the caste composition of those who go out on primary work and those who go out on any work (Tables 8 and 9), both tables show that individuals from the Murao community, though largely cultivators in both 1983 and 2008, do larger amount of additional work outside Palanpur than before. This is equally true for Thakurs. While only 4 percent of them were doing some additional work outside in 1983 (comparing 25 percent in primary job and 29 percent in any job), 16 percent of them do some additional work outside in 2008. This establishes that not only has there been a rise of people going out on secondary work, there are particular castes that show a big increase over the period.

2.2. DETERMINANTS OF EMPLOYMENT OUTSIDE PALANPUR:

In this section, we explore what are the covariates of working outside and how their influence has changed over time. First we estimate the marginal effects of covariates on the probability of working outside on a primary job. We also calculate similar marginal effects for the probability of working out on any job. We use probit models estimated separately over 1983, 1993 and 2008 to allow for structural flexibility, in particular because we want to tease out if there are robust caste differences within each year. Finally we estimate the probit models pooled over 1983 and 2008 data in one exercise and 1993 and 2008 in another exercise to examine changes over time[7].

[7] We could have equivalently reported results only from the pooled estimation but that has the problem that sometimes a community that is particularly relevant in one year becomes totally irrelevant in another year. For example, Passis are important in 1983 but they predict not going out in 2008 perfectly. If we were to pool the 1983 and 2008 data together, we would have to put Passis in a broader category (so that this category does not predict not going out perfectly in 2008). But this would hide how important Passis are in 1983.

There are two motivations for carrying out these estimation exercises. The most important motivation is that we want to separate confounding factors at play. We do so by taking a multivariate framework that takes into account land ownership, age of the adult male, his years of education, number of adult males in the family and dummy variables representing caste. The motivation for most of the variables is laid out in LS (1998) and will be discussed further below when we get to the results. What we add to the original list of variables is age of the adult male. Our specification is estimated using the whole sample of adult males instead of selecting only those working in the labour force. The latter would require us to estimate additional models of sample selection into the labour force. While this is an important exercise, it requires variables that explain participation but not the choice to go out thereafter. Finding such variables requires more investigation and we leave it as an exercise to be conducted in future work. Our estimation, done on the whole sample, however, produces consistent estimators.

A second motivation is that we can easily conduct statistical testing. It can be argued that since we are looking at a census of Palanpur, conducting statistical testing is not needed. However, as in other work conducted before on Palanpur, we choose to look at Palanpur as a part of a super population.

First we look at the probability of working outside as a primary occupation. A summary table of covariates for each year and caste are presented in Table 10. Columns (1), (3) and (5) in Table 11 present the relevant probit estimations done for each survey year. The most robust variable that is significant through all the regressions is land owned. The more the land owned by the household of the individual (controlling for the total number of adult members in the households), the lower the probability of the individual working outside. This implies that lower land ownership pushes people to seek work out of Palanpur. However the structural relation between land ownership and going out has remained more or less constant over time. The marginal effect is around 0.01 and additional statistical tests show that we cannot reject the null (at 10 percent) that the marginal effect has stayed the same over time. This has a rather significant implication for the Palanpur economy. Notice in Table 10, the average land size has fallen from 24 bigha in 1983 to 14 bigha in 1993 and down further to 11 bigha in 2008. This implies that if we were to predict working outside, the lower land holdings in 2008 would make going out more likely

(although note that one would also have to factor in the constant term). This is a level effect of falling land ownership over time. An intriguing finding is that the number of male adults is insignificant. This suggests that it is the size of land holding of the household that matters and not the land/labour ratio. In a setting such as Palanpur land ownership is a good indicator of wealth. We might expect therefore that wealthy households are less likely to send their family out to work. On the other hand, wealth could also proxy access to networks and connections. In this case one might have expected wealth to be positively associated with outside work. As we have noted above, in 2008, the jobs that people do outside Palanpur are mostly business and casual labour. There are very few regular jobs outside Palanpur. These are the jobs that wealthy people would have better access to, through networks and connections. But it would seem that at least in 2008, this is not the case. However, to the extent that connections are linked to caste and not only to wealth, this does not imply that networks and connections have no role to play in earlier years.

The contrast between 1983 and 2008 (and 1993) becomes apparent when we examine the marginal effect of education. In 1983 there is a significant positive marginal effect of education indicating that people with higher education were working outside (this has been interpreted as a pull factor by Ranjan 2009). This is largely due to the regular jobs held by people: jobs that required some education. However both in 1993 and 2008, education has no significant marginal effect on the probability of working out. This points out that the jobs outside Palanpur in 1993 and 2008 do not require much education and is consistent with decline in regular employment outside the village.

The two results together suggest that going out of Palanpur for work in 2008 has been due to falling land size and due to disappearance of regular jobs. It raises the question why are there so few doing regular jobs? After all, there has been a significant increase in the number of employers providing non farm jobs in the rapidly growing city of Morababad in the last decade. One possibility is that those villagers who remain in Palanpur in 2008 are not as well-networked to get regular jobs as before.

Controlling for the effect of other covariates, some caste dummy variables come out to be significant, pointing to advantages/natural preferences for outside

work. As has been remarked earlier, in 1983 the Passis in the village, who held railway jobs and jobs in a cloth factory, appeared to possess an inherent advantage for such outside work. This was still evident in 1993. By 2008, however, the Passi community had more or less abandoned Palanpur, leaving Thakurs as the best placed of the remaining social groups to get outside jobs. Gadarias display the most variability in working outside. The closure of the cloth mill hit them hard in 1993, for example, but they seem to have recovered substantially by 2008. This raises natural questions as to why some castes seem to be doing better than others even after controlling for wealth.

While it is interesting to see how castes perform relative to a reference category for each year (Murao in 1983 and 1993 and Murao/Passi in 2008), one must be careful when drawing inferences about changes over time because these also depend on how the base itself is changing over time. Taking this into account, we run a pooled probit estimation where we interact a dummy that represents 2008 with all the caste dummies (we make Murao/Passi the reference group). Table 12 reports the results of the interaction terms (all the other results are similar to the ones reported in Table 11). We conduct two pooled exercises, one with 1983 and 2008 data to examine the long-term changes and the other with 1993 and 2008 to examine the shorter run changes. In the long run, we find that once we control for other covariates, the only caste dummy that shows a significant change is the reference category that shows a decline (since it includes Passis) and "Others". Thus, there is no clear increase or decrease in the influence of any of the other castes over time. In the shorter run regression (1993-2008), Gadarias show higher outside work, which, as remarked before, reflects their being able to come out of the loss of outside work just before 1993.

Do these conclusion change if we look at any outside employment rather than outside work as a primary occupation? We have noted before, that, at least as a proportion of labour force, this indicator has shown an increase over the period 1983-2008. Probit Estimation for each year (Columns 2, 4 and 6 in Table 11) shows that the results are not wildly different from those discussed above. However the marginal effect of land ownership becomes slightly greater, indicating that it is individuals with low landholdings that go out for supplementary work. This is not very surprising as a

good job requiring education is hardly something that would be done on a supplemental basis. These are mostly casual non farm jobs.

Results from pooled estimation (Table 13) show that controlling for other covariates (including land ownership), the marginal effect of a dummy representing 2008 is insignificant for most castes except the base category (Murao/Passis) which , as in the case of primary work, shows a fall. Similarly Gadarias show a rise in the short term from 1993 but over the period 1983-2008, they show a fall. The argument for these results is the same as were presented above and are therefore not repeated.

To summarize, the lower land holdings in Palanpur seem to be the biggest driver of working outside. However, it is important to note that in a village with growing population, it is inevitable that land ownership will fall over time. The result that the marginal effect of land ownership has not change over time indicates that people with low land ownership are as likely to work outside as before. Some communities have shown slightly different trends but these are largely governed by the loss of regular jobs by 1993 and subsequent recovery. Thus when we look at the period between 1983 and 2008, and control for land ownership, we see that working outside has not changed for most communities and in some cases (like Passis), has in fact gone down.

2.3 **Determinants of Employment Activities outside Palanpur :**

Given the overall picture described in the previous section, it is important to appreciate that the types of jobs for which people go out of Palanpur are varied and have changed. The mix of activities for which people go out has changed. (See Table 14 for the various activities and their classification in 2008). We thus turn to a deeper examination of these outside activities. It is important to note, however, that it is not always possible to interpret each coefficient in a consistent manner because the reference category will be a mixture of both activities for which people don't go out and activities for which people do go out. For example, when we model outside non-farm casual labour, the reference category is everyone else including regular job holders within and outside the village, casual labour in the village as well as cultivators. A more involved model would estimate all the activities together as a

multinomial logit model or an unordered probit model, but interpretation in those models is not always straightforward. This is work for the future. In the mean time examining each activity in isolation does yields insights, subject to the cautionary note above concerning the reference category.

2.3.1 Outside Non Farm Casual Labour:

The proportion of those with non-farm casual labour in 1983 was 4.5 percent, 5.3 percent in 1993 and was 7.3 percent in 2008. Thus there has been a secular rise in outside non-farm casual labour. To examine the link between various covariates and the probability of outside non-farm casual work, we run three probit estimations for each year (Table 15). We find that while in 1983, more educated and more landed people were less likely to be non-farm casual workers, in 1993 and 2008, this is no longer true. This is an interesting result because it suggests that working out on non-farm casual jobs is not driven by land ownership in these years. However in 2008, Jatabs (a caste with low landholdings) are more likely to work outside on these jobs than others. If we drop caste dummies, land ownership becomes significant, indicating that the caste dummies in 2008 are picking up some of the effect of the lower amount of land owned. The negative significant coefficient of education in 1983 reflects that the reference category contained regular outside work that people with some education had access to. However in 1993 and 2008, people with regular jobs have disappeared and therefore education is no longer significant. It is also true that the average years of education have gone up over the years, albeit to only a modest extent.

Pooled regressions (results not shown) show that there is no increase over time (short run and long run) for any caste. To some extent, this is because Jatabs also have lower ownership of land over the long run. If we drop land ownership from the pooled regression, the dummy for Jatabs shows a significant rise between 1983 and 2008.

This rise is especially relevant when we think about how Jatabs have been affected by the growth process. Our results, in conjunction, with the result that there has been an increase in non-farm income for Jatabs (Himanshu et al 2010) show how

the increased demand for non-farm casual jobs have made the lower social groups better off.

2.3.2 Outside Self Employed:

In 1983, there were only 6 people who were self employed and worked outside the village. The rise in self employment outside Palanpur is a recent phenomenon. Table 16 compares probit estimation results for the years 1993 and 2008. It is noticeable that in 2008, Thakurs, Telis and Gadarias were mostly involved in self employed businesses outside of Palanpur. The two important businesses that take these three communities out of the village are repair shops in Chanduasi (mostly Telis) and Marble polishing enterprises (Gadarias and Thakurs). While the regression in 2008 points out that people with low ownership of land partake in these activities, the move to these businesses do not seem to be a step taken out of desperation. It is quite interesting to note, for example, that some of the Telis had been working as apprentices in repair shops in the 1990s. Marble polishing was first introduced to the village in the 1990s. Indeed two people in 1993 survey worked for marble polishing enterprises. At some point thereafter, some people who were in the trade realized that they could do better if they owned a marble polishing machine. Thus we see a process of capital accumulation as a deliberate choice and it is difficult to reconcile these observations with a process of villagers having been pushed into these business activities. It is also relevant to the story that people in the trade were reacting to the increased demand for marble polishing. As noted earlier, the increase in construction around Moradabad has been substantial over the last 10 years with new houses and hotels coming up. Anecdotal evidence also suggest that even in smaller areas like Chandausi, over the last decade, there has been a spurt in demand for marble polishing in houses. The decision to buy marble polishing machines may well have been in response to this rising demand. Since the growth of housing and construction industry has been an important feature of India's growth experience, this illustration is especially relevant in trying to understand how this may have affected occupation choice and incomes in rural India.

2.3.3 Outside Regular and Semi Regular Employment:

In 1983, 16 percent of the male adult population were engaged in outside regular work. By 1993, this number had fallen to 6.5 percent. As has been argued earlier, this was to some extent due to the closure of the cloth mill which employed regular workers. There was no sign of recovery in regular employment by 2008 however, the proportion stayed at a lowly 6.2 percent. It seems that Palanpur residents have never recovered the regular jobs they lost in 1980s. As we have argued above, this is a major explanation for why Palanpur does not show more non farm work outside now relative to the past.

Looking at the covariates in each year (Table 17), Gadarias and Passi's were more likely to have regular jobs in 1983 but this advantage had shifted to Thakurs, Telis and Dhimars by 1993 and 2008. Land ownership matters but the strength is much weaker now, indicating that getting a regular job is not merely driven by wealth. Indeed, it requires contacts and education (which is a significant variable in 1983 and 2008).

Looking over time (Table 18), we see that there has been a fall in regular employment for Thakurs over 1983-2008. Have the Thakurs lost the advantage they had in the past or did the more networked Thakurs leave the village? Again it is important to remind ourselves that these are partial effects. Thakurs would still enjoy an advantage because of their higher education - which we have seen above matter for regular jobs. But it does mean that there is no snowballing effect that one might expect if, for example, Thakurs had access to networks to get regular jobs and more and more members of their community took advantage of this network over time. However, it is important to appreciate here again that selective migration of Thakurs who had regular jobs would also lead to a similar trend.

We next look at the probability of doing an outside semi-regular job (Table 19). In 1983, the proportion of male adults working outside on a semi regular basis was 6 percent. By 1993, it had fallen slightly to 5 percent. By 2008, it had fallen further to 3 percent. While Passi's had an advantage in doing such jobs, it would seem that this has disappeared with them.

3.1 Migration: Some Stylized facts

At various stages above, we have pointed to the possibility that selective migration might have a big say in how the snapshots of the village look. Hence we look at long-term migration, that is, people who left the village all-together (including some who leave the village for 8 months per year for brick kiln work). But before we turn to individuals, let us look at the migration of whole households. Table 20 lists the migration of households over the different years of the survey. In the earlier years till 1983, natural attrition like death and marriage were not excluded. However for the 1993 and 2008, we have taken out natural attrition. It is important here to point out that if we include natural attrition, 34 of the 1993 vintage households disappeared by 2008. This seems like a very large number of households, but notice how the number falls to 27 when we exclude death and marriage. It was noted in LS (1998) that there was an increased nuclearization of households and that in 1993 there were some households with just a few old members. Taking that in account, the disappearance of 7 complete households due to attrition is not surprising.

Table 20 also provides a decomposition of the migrating households by caste. It can be clearly seen that the biggest change since 1993 has been the out migration of the Passi households. Passi's had been remarked on in earlier studies of Palanpur as having a higher propensity to migrate in and out the village, and are generally seen as a more mobile community than others. Having said that, the village has also seen migration of 6 Thakur and Murao households.

Has migration changed over the last 25 years? We have to keep in mind that the two periods 1983-1993 and 1993-2008 are of unequal length and that the base number of households is larger in the latter period. Therefore the larger numbers of households migrating in the latter period is deceptive. Table 21 provides a breakdown of migration flows between 1983 and 1993 and between 1993 and 2008. Among households that showed some migration between 1993 and 2008, 33 percent refer to instances where all the household members migrated. This number was however larger at 38 percent between 1983 and 1993. Hence it would seem to be the case that conditional on migration, it is more likely now to be of a kind where some members go out instead of the whole household.

Since the base year households in 1983 and 1993 are different, it is important to focus on individuals. As before we concentrate on the migration of adult males. Between any two years, say 1993 and 2008, we look at the migration of adult males who are 15 at the time of the base year 1993. We could have taken an alternative criterion, for example, we could have calculated the number of males who would have been above 15 in the end year had they not migrated from the village. However we would then have to include children who left with their parents between 1993 and 2008[8].

Migration has clearly gone up between 1993-2008 as compared to 1983-93 (Table 22). The annualized migration rate in the period 1983-93 was 0.95 percent while the annualized migration rate in the period 1993-2008 is 1.16 percent.[9] This is an increase but not a dramatic one over the periods. To some extent the possibility of outside daily work may diminish the need to go out. Thus the proximity of Palanpur to Moradabad and Chandausi is one reason why we don't see huge migration rates.

However between castes, there is a big difference in migration rates. While Passis and "Others" constituted the major share of migration between 1983 and 1993, Thakurs and Jatabs also came into the picture between 1993 and 2008. The disappearance of Passis that started between 1983 and 1993 continued at an accelerated pace post 1993. The migration rate among Telis and Dhobis has remained low throughout the period.

3.2 Determinants of Migration

The key purpose for studying migration in this paper is to examine selective attrition. Therefore it is important to ask what determines migration. In particular we are

[8] Of course our criterion leaves out males who could turn 15 somewhere mid way between our period and who may have migrated. But given migration of whole households (discussed below) and the problems in getting the age accurate, it is difficult to get the timing of who left when correct.

[9] It is not always clear why individuals migrate. This is especially true at ages between 15 and 20. Often when the head of the household moves to get a job outside, the son moves along with him . The son will within a year (or immediately) also work in the new place. So he is also a migrant for employment. But when answering to surveys, they list themselves as being a part of family that moves and not a move explicitly for employment. We therefore report two rates one of which includes those who said they explicitly moved for employment. The annual migration rate for this case is 1.05 percent which is still higher than in the period 1983-93.

interested especially in learning if there are factors, like low ownership of land, or networks that come about when people from the same family have migrated out before. We would also like to ask if people with particular job profiles are more likely to migrate out or whether there are some communities who, for some (historic) reason, are more likely to migrate.

We answer these questions into two ways. First using probit regressions we examine the determinants of migration over the two periods 1983-1993 and 1993-2008. Second we want to see if people are more likely to migrate if there were larger migration flows from the same root family period in the previous periods. This will help us look at effects of possible familial networks that establish with members from a larger root family migrating in the past.

The covariates that we look at are land ownership of the household, education, age, the primary job the person did in the base year and whether the occupation required the person to go out of the village. There are contrasting results between 1983-93 and 1993-2008 (Table 23). Most variables in the estimation are significant in 1983-93. Landed people migrate out less, suggesting that wealthy households were less likely to migrate. But the members who left were educated. Larger households (in the base year) have lower migration. This result indicates that it is not pressure on land that made people migrate. One possible explanation is that households in this period tended to move together as a unit. This would be more difficult if there were a larger number of people to support. However this is not a fully satisfactory explanation as the number of members who migrate from a family is endogenous. So one needs to think deeper into why this was the case in the 1980s.

People in regular/semi-regular jobs inside the village were less likely to migrate while those who went out for work in 1983 had a greater chance of migrating. This last result implies that the there was an exodus of people who had regular jobs outside between 1983 and 1993.

In 1993-2008, interestingly, some of the trends change. Most importantly, if an individual was working outside the village, he is more likely to stay in the village. However, we need to be careful with this interpretation. If individuals working out in 1983 lost their jobs and many of them left, those left in the village are more likely to

be ones whose jobs were more secure (or those who hadn't lost their job earlier). Hence they may be less likely to migrate out post 1993.

Land ownership became a more important variable post 1993. This implies people with less land were more likely to migrate in this period. Education had no role to play, indicating that both educated and uneducated people were equally likely to migrate. This is consistent with the observation that post-1993 more households have some member who have migrated. Thus education seems to matter less for migration.

Next we would like to explore whether past migration that create family networks outside are important for migration decisions. For this we estimate the migration outcome between 1993 and 2008 and in addition to standard covariates considered above, we introduce a variable that measures the number of 1983 root family members that have gone out between 1983 and 1993. We find that the variable is insignificant (result available on request). However, this regression necessarily omits households who have no member of their root family in the village by 1993. We have noted earlier that between 1983 and 1993, families tended to leave as a group. The insignificance of this variable is not surprising given that migration is not very high in Palanpur. So for families that survive through the years, there are not many members who have migrated. It is possible that this will change in the future given that members from more families are migrating out (without the whole family moving out).

3.4 Conclusion

In the last two decades, as the Indian economy has grown rapidly, there has been a increase in demand for labour in non-farm jobs. This has resulted in higher incomes as labour is reallocated from low paying farm activities to a more dynamic and remunerative non-farm sector. Therefore, in rural India, where incomes from non-farm jobs now constitute a higher share of total income as compared to before, total incomes have risen. Since non-farm jobs are largely outside the village, the growth of such jobs reflects an increasing level of connectedness to urban India and its rapid growth. Such jobs may well be an important reason why rural poverty has fallen over

the last decade. It is thus important to ask what kinds of non-farm jobs people in rural India are involved in and what their determinants are.

It is in this context that we look at Palanpur, a village in the state of Uttar Pradesh, for which data are available from 1957 to 2008. In this paper, we explore whether Palanpur residents go out of the village for primary employment and how this has changed over the last 25 years. In this paper, we look at time allocations to different activities in defining what primary activities are. This is in contrast to categorizing activities on the basis of incomes. We know from Himanshu et al that the share of income from non farm activities has gone up. Here we wish to understand what are the activities that people spend their time doing and how that has changed over time. Such rich time series data are available at the individual level from 1983 onwards and represent a strength that cannot be matched by larger data sets such as those collected by the National Sample Survey Organization.

We find that, compared to 1993, males in 2008 are more likely to work outside Palanpur. In 1993, 19 percent of the adult male population work outside while the proportion is 23 percent in 2008. However, taking a longer-term view back to 1983 (with 29 percent of adult males working outside the village), this does not seem to be the case when we look at only primary occupations. Once we allow for multiple activities and we look at the labour force as opposed to the adult make population, we find that there has been a rise in work outside Palanpur even over this longer time horizon. While 38 percent of the labour force went out for some work in 1983, the number fell to 33 percent in 1993 but has risen to 42 percent in 2008. Thus secondary or additional jobs, which are for much shorter duration, drive the growth of outside jobs in Palanpur.

It is important to note that even with the inclusion of secondary employment outside the village, the change over the period 1983-2008 is not spectacular. We delve deeper into why this is the case. We find that this has to do primarily with disappearance of regular jobs that took people out of Palanpur. We find that there has been selective migration of people with regular jobs, especially, people from the Passi community. Since regular jobs were a large fraction of all outside jobs in 1983, the disappearance of people doing them has led to a selected sample, one where people

left in the village have a lower likelihood of working outside on regular jobs. Indeed, even the absolute number of people with regular jobs has not risen in the last 15 years.

For other jobs, on the other hand, residents of Palanpur are now more likely to work outside the village. Casual non-farm jobs are mostly outside Palanpur and newly emergent self-employment enterprises also take people out of Palanpur. While in the case of casual jobs, it would seem that falling wealth is an important contributor, for self employment enterprises, this is not the case. There has been some capital accumulation (albeit small, in buying marble polishing machines) and training (leading to engine repair shops). These are not traditional enterprises like barber or carpenter shop (which also explains why they are more outside the village now). In explaining the growth of these activities, the importance of a growing economy cannot be over-emphasized. A growing India with increase in urban housing, greater trade and commerce, has resulted in increasing demand for skilled and unskilled labour. In the context of Palanpur, these are reflected in the increase in casual non-farm labour and establishment of small enterprises like marble polishing.

When we don't control for any covariates, some castes show greater tendency to work out of the village. We find that Jatabs are more likely to work outside on non-farm casual labour jobs and that they have given up casual agriculture labour. Given that non farm incomes are higher than incomes from agriculture casual labour, this reflects how a greater demand for non-farm casual labour may lead to higher incomes for the poorest social classes.

We show most of the trends of outside employment for different castes are dictated by falling land ownership. While in this paper, we contend that land ownership reflects wealth, there can also be other explanations, some of which we plan to pursue in subsequent work. For example, there may be land threshold effects, where landholdings may have become so small that it is not profitable to grow on them. Intriguingly, the number of male adults in a household is insignificant, suggesting that land labour ratios may have a limited role to play. However, one needs to be careful on how to interpret this. Often it's the land cultivated rather than land owned that is an important correlate of going outside for a job. However the choice of how much land to cultivate (which involves leasing in or out) is endogenous and inclusion of this characteristic on the right side as a covariate would not be

correct. To understand this better, we need to integrate the farming choice with the choice to go outside. Future work along these lines may be possible given that the Palanpur data set is very strong in information about agriculture.

An important technical contribution of this paper is to point out the problems of looking at snap shots of a village economy and making inferences about dynamics. The case of Palanpur shows that when those who migrate are also people more likely to be working outside when living in the village (as our migration regressions show), then the village as a unit will tend to report lower outside employment over time, at least in the short run, as it does in 1993. Therefore while people in various professions are going out of Palanpur more than before, the selection bias will tend to paint a different picture unless one looks more closely. In this paper, we have not explicitly considered the choice of migration. Why do people working outside find it optimal to migrate? Is it merely the closure of a factory that lead people to migrate or are there other reasons why some communities find it easier to migrate. We do not confront these questions in this paper. However in many cases, we have data on migrants themselves after they have moved to a newer place. In future work we intend to look more explicitly at the migrant households.

In this paper, we have only just begun to understand what are the covariates of occupation choice. So far we have not modeled the process of job search itself. How do people get jobs outside? Are labour markets segmented? Do people get the amount of work that they seek? In 2008, we have detailed questionnaires that will explicitly help us go into these issues. Similarly, an interesting observation about the last 15 years is the rise of entrepreneurship. What are the costs of establishment of business? Anecdotal evidence suggests an interesting divergence between the experience of Telis and Jatabs. Though both had very little land in 1993, Telis learnt the art of engine repair through apprenticeship, mostly outside the village. In contrast, Jatabs moved to cultivation and casual non-farm labour. The acquisition of skills outside the village among Telis may reflect a tighter community willing to pass on important skills and leading to setting up of enterprises. We have not explored these issues fully in this paper.

While in this paper, we study how time allocation among activities has been changing, we have not integrated these trends, in great detail, with how they have

resulted in higher incomes. An important component in understanding working outside is the returns from such activities. These depend on both the duration of work in a year (which is endogenous) and the wage rate (profit). Our dataset provide details of the total amount of work that people do and the hourly/piece wage rates. Clearly if non-farm employment is to be panacea for poverty, understanding occupation choice and how it reacts to wage rates becomes very important. Moreover, in the bigger scheme of things, it is important to understand what affects the income earned by individuals and households and how it has changed over time. As India integrates into the global economy, and the village economy integrates into a rapidly growing India, it is important to investigate the role of rising non-farm income in increasing prosperity. Our preliminary investigation on changing occupation choice is only one aspect in understand rising incomes. Our initial forays have thrown up interesting ideas to explore and we expect to pursue them in the future.

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Table 1: Occupation Structure in Different Survey Years (Adult Males 15+):						
	1957-58	**1962-3**	**1974-5**	**1983-4**	**1993**	**2008**
Cultivation and Livestock	141 (80.5)	125 (72)	140 (65)	141 (49)	187 (55)	184 (48)
Self Emp (Non Farm)	6 (3)	8 (5)	na	17 (6)	16 (5)	45 (12)
Wage Employment (Reg+Sem Reg)	5 (3)	16 (9)	46 (21)	73 (26)	46 (14)	43 (11)
Casual Lab (Ag and Non Ag)	22 (13)	16 (9)	na	23 (8)	34 (10)	36 (9)
Others (Out of lab force, Student, Vocational Training, Retired, Unemployed)	1 (0.5)	8 (5)	na	31 (11)	57 (17)	79 (20)
All Occupations	175 (100)	173 (100)	214 (100)	285 (100)	340 (100)	387 (100)

Percentages may not add up to 100 due to rounding

Table 2: Occupation Status (Further Breakdown)								
	1957		**1983**		**1993**		**2008**	
	Prim	**Sec**	**Prim**	**Sec**	**Prim**	**Sec**	**Prim**	**Sec**
Cultivation and Livestock	141 (81)	12	141(50)	32	187 (55)	13	184 (48)	122
Self Employment (Non Farm)	6 (3)	2	17 (6)	6	16 (5)	7	45 (12)	26
Skilled Self Employed	6	2	5	3	9	5	13	3
Unskilled Self Employed			12	3	7	2	32	23
Wage Employment (Regular/Semi Regular)	5 (3)	6	72 (26)	2	46 (14)	3	43 (11)	8
Regular (Skilled)	1		7	1	7		13	
Regular (Unskilled)	4	4	48		21	1	17	
Semi Regular (Skilled)			1		1		6	3
Semi Regular (Unskilled)		2	16	1	17	2	7	5
Wage Employment (Casual)	22 (13)	24	23 (9)	36	34 (10)	34	36 (9)	74
Agriculture Labor	22	7	10	21	16	17	2	30
Non farm Casual Labour	0	17	13	15	18	17	34	44
Study	0 (0)		9 (3)		28 (8)		46 (12)	
Other	0 (0)		5 (2)	2	4 (1)		9 (2)	1
None	1 (1)	131	17(6)	206	25 (7)	280	24 (6)	156
Total	175 (100)	175	284 (100)	284	340 (100)	340	387	387

Table 3: WORKING OUTSIDE IN PRIMARY JOB

Proportion of work done outside	1983	1993	2008
Casual Labour	56	53	78
Self-Employed	35	56	60
Wage Employment (regular and semi-regular)	84	91	81
Total	37	24	29

Table 4a: Working Outside Palanpur (Base: Adult Male Population): By caste										
	Thakur	Murao	Dhimar	Gadaria	Dhobi	Teli	Passi	Jatab	Others	Total
Working Outside in Primary Job (1983) %:	22	10	36	43	14	30	62	27	55	28
Working Outside in Primary/Subsidiary Jobs (1983) %	27	15	44	48	14	43	62	39	55	34
Total Freq (1983)	**64**	**67**	**25**	**21**	**7**	**30**	**26**	**33**	**11**	**284**
Working Outside in Primary Job (1993) %:	27	6	30	7	0	21	37	17	31	19
Working Outside in Primary/Subsidiary Jobs (1993) %	30	6	36	11	0	41	37	35	31	25
Total Freq (Excluding Study/Other/None) (1993)	**77**	**81**	**33**	**28**	**9**	**34**	**19**	**46**	**13**	**340**
Working Outside in Primary Job (2008) %	30	7	31	34	8	40	0	26	20	23
Working Outside in Primary/Subsidiary Jobs (2008) %:	42	20	38	38	17	51	0	36	20	33
Total Freq (Excluding Study/Other/None) (2008)	**98**	**101**	**32**	**29**	**12**	**43**	**7**	**50**	**15**	**387**

Table 4b: Working outside Palanpur (Base: Adult Male Labour force) By caste										
	Thakur	Murao	Dhimar	Gadaria	Dhobi	Teli	Passi	Jatab	Others	Total
Working Outside in Primary Job (1983) %:	25	12	41	50	14	32	64	32	55	32
Working Outside in Primary/Subsidiary Jobs (1983) %	29	15	50	56	14	46	64	46	55	38
Total Freq (Excluding Study/Other/None) (1983)	**55**	**59**	**22**	**18**	**7**	**28**	**25**	**28**	**11**	**253**
Working Outside in Primary Job (1993) %:	36	10	40	12	0	23	47	22	63	24
Working Outside in Primary/Subsidiary Jobs (1993) %	43	11	48	16	0	45	47	44	75	33
Total Freq (Excluding Study/Other/None) (1993)	**61**	**73**	**25**	**25**	**9**	**31**	**15**	**36**	**8**	**283**
Working Outside in Primary Job (2008) %	39	8	42	45	13	47	0	30	33	29
Working Outside in Primary/Subsidiary Jobs (2008) %:	55	24	50	50	25	61	0	41	33	42
Total Freq (Excluding Study/Other/None) (2008)	**75**	**85**	**24**	**22**	**8**	**36**	**5**	**44**	**9**	**308**

Table 5:

Out on Primary Job: Occupation Profile

	1983	1993	2008
Skilled Self Employed	1 (1)	2 (3)	7 (8)
Unskilled Self Employed	5 (6)	2 (3)	20 (22)
Regular (Skilled)	5 (6)	3 (5)	10 (11)
Regular (Unskilled)	39 (49)	19 (31)	14 (16)
Semi Regular (Skilled)	1 (1)	1 (2)	4 (4)
Semi Regular (Unskilled)	16 (20)	17 (27)	7 (8)
Casual Labour (Non Agriculture)	13 (16)	18 (29)	28 (31)
TOTAL	80 (100)	62 (100)	90 (100)

Table 6: Out on Any Job: Occupation Profile			
	1983	1993	2008
Skilled Self Employed	3 (3)	4 (5)	7 (5)
Unskilled Self Employed	5 (5)	2 (2)	22 (17)
Regular (Skilled)	5 (5)	3 (4)	10 (8)
Regular (Unskilled)	39 (40)	20 (24)	14 (11)
Semi Regular (Skilled)	1 (1)	1 (1)	7 (5)
Semi Regular (Unskilled)	17 (18)	19 (23)	9 (7)
Unspecified Casual Labour	25 (26)	35 (42)	53 (41)
TOTAL	95 (100)	84 (100)	129 (100)

Table 7a: Occupation Structure in 2008, by Caste

Primary Occupation	Thakur	Murao	Muslim	Jatab	Others	Total
Cultivation and Livestock	37	71	36	56	34	48 (184)
Skilled Self Employed	0	3	13	0	2	3 (12)
Unskilled Self Employed	13	1	7	0	17	8 (32)
Regular Wage Employment	15	3	9	0	8	8 (30)
Semi Regular Wage Employment	5	3	2	4	2	3 (13)
Casual Labour (Non Agriculture)	5	3	9	28	10	9 (35)
Casual Labour (Agriculture)	0	0	4	0	0	1 (2)
Study	18	12	4	6	13	12 (46)
Other	3	0	9	0	2	3 (10)
None	3	4	7	6	11	6 (23)
All Occupations	100 (98)	100 (101)	100 (55)	100 (50)	100 (83)	100 (387)

Table 7b: Occupation Structure in 1993, by Caste

Primary Occupation	Thakur	Murao	Muslim	Jatab	Others	Total
Cultivation and Livestock	45	75	60	48	46	55 (187)
Skilled Self Employed	3	4	2	0	3	3 (9)
Unskilled Self Employed	3	1	0	2	3	2 (7)
Regular Wage Employment	9	7	7	0	13	8 (28)
Semi Regular Wage Employment	13	0	2	4	5	5 (18)
Casual Labour (Non Agriculture)	5	1	7	11	5	5 (18)
Casual Labour (Agriculture)	1	1	14	13	2	5 (16)
Study	13	6	0	9	10	8 (28)
Other	3	1	0	0	1	1 (4)
None	5	2	7	13	11	7 (25)
All Occupations	100 (77)	100 (81)	100 (43)	100 (46)	100 (93)	100 (340)

Table 7c: Occupation Structure in 1983, by Caste

Primary Occupation	Thakur	Murao	Muslim	Jatab	Others	Total
Cultivation & Livestock	52	73	51	48	29	50 (141)
Skilled Self Employment	2	1	0	3	2	2 (5)
Un-Skilled Self Employment	3	0	0	6	10	4 (12)
Regular wage employment	27	9	11	3	33	19 (55)
Semi-regular wage employment	3	1	5	9	11	6 (17)
Casual Lab (NON AGR)	0	0	14	9	6	5 (13)
Casual Lab (AGR)	0	3	14	6	1	4 (10)
Study	5	6	3	0	1	3 (9)
Other	3	1	0	3	1	2 (5)
None	6	4	3	12	6	6 (17)
All Occupations	100(64)	100(67)	100(37)	100(33)	100(83)	100(284)

Table 8: CASTE PROFILE OF THOSE WHO WORK OUTSIDE ON PRIMARY WORK			
CASTE	1983	1993	2008
Thakur	14 (18)	19 (31)	29 (32)
Murao	7 (10)	5 (8)	7 (8)
Dhimar	9 (11)	10 (16)	10 (11)
Gadaria	9 (11)	2 (3)	10 (11)
Dhobi	1 (1)	0 (0)	1 (1)
Teli	9 (11)	7 (11)	17 (19)
Passi	16 (20)	7 (11)	0 (0)
Jatab	9 (11)	8 (13)	13 (14)
Others	6 (7)	4 (6)	3 (3)
All Castes	80 (100)	62 (100)	90 (100)

Table 9: **CASTE PROFILE OF THOSE WHO WORK OUTSIDE (ANY WORK)**

CASTE	1983	1993	2008
Thakur	14 (18)	23 (27)	41 (32)
Murao	9 (10)	5 (6)	20 (16)
Dhimar	11 (11)	12 (14)	12 (9)
Gadaria	10 (10)	3 (4)	11 (9)
Dhobi	1 (1)	0 (0)	2 (2)
Teli	13 (13)	14 (17)	22 (17)
Passi	16 (16)	7 (8)	0 (0)
Jatab	13 (13)	16 (19)	18 (14)
Others	6 (6)	4 (5)	3 (2)
All Castes	95 (100)	84 (100)	129 (100)

Table 10: Summary year and caste wise of covariates:

	2008				1993			
	# Adult Males	Education (Yrs)	Age(Yrs)	Land Owned	# Adult Males	Education (Yrs)	Age(Yrs)	Land Owned
Murao/Passi	2	6	32	17	2	5	33	21
Thakur	2	7	31	12	2	5	34	16
Dhimar	2	5	37	5	3	3	34	4
Gadaria	3	6	30	12	2	2	35	13
Muslim	3	3	34	5	2	1	37	11
Jatab	2	2	36	5	2	1	32	9
Others	2	6	36	5	2	13	33	4
Total	2	5	33	11	2	4	34	14

	1983			
	# Adult Males	Education (Yrs)	Age(Yrs)	Land Owned
Murao/Passi	4	3	32	39
Thakur	3	5	32	28
Dhimar	2	2	36	7
Gadaria	2	2	35	20
Muslim	2	1	32	9
Jatab	2	0	34	12
Others	2	3	30	2
Total	3	3	33	24

Table 11: Probit Estimation of Probabily of being out of Palanpur for primary and any work

	1983		1993		2008	
	Out (Prim)	Out(Any)	Out (Prim)	Out (Any)	Out (Prim)	Out (Any)
	(1)	(2)	(3)	(4)	(5)	(6)
Age (yrs)	-0.006	-0.006	0.000	-0.002	0.002	-0.001
	(0.001)***	(0.001)***	(0.753)	(0.304)	(0.331)	(0.415)
Thakur	0.022	-0.005	0.225	0.274	0.275	0.213
	(0.798)	(0.961)	(0.011)**	(0.003)***	(0.001)***	(0.007)***
Dhimar	0.098	0.087	0.145	0.214	0.214	0.075
	(0.447)	(0.571)	(0.096)*	(0.043)**	(0.028)**	(0.417)
Gadaria	0.272	0.256	-0.034	0.017	0.375	0.180
	(0.059)*	(0.092)*	(0.692)	(0.892)	(0.000)***	(0.062)*
Dhobi/Teli	0.009	0.024	0.051	0.246	0.267	0.154
	(0.923)	(0.847)	(0.535)	(0.016)**	(0.003)***	(0.096)*
Passi	0.397	0.318	0.238	0.252		
	(0.009)***	(0.070)*	(0.076)*	(0.082)*		
Jatabs	0.089	0.124	0.052	0.240	0.203	0.078
	(0.472)	(0.374)	(0.505)	(0.017)**	(0.034)**	(0.395)
Others	0.144	0.060	0.192	0.192	0.067	-0.114
	(0.340)	(0.732)	(0.183)	(0.226)	(0.615)	(0.429)
Referemce Cat:						
Murao (1983,1993)						
Murao/Passi (2008)						
Education (yrs)	0.022	0.018	-0.003	-0.003	0.008	0.000
	(0.003)***	(0.024)**	(0.313)	(0.369)	(0.212)	(0.944)
Land Owned	-0.009	-0.011	-0.008	-0.010	-0.011	-0.013
	(0.000)***	(0.000)***	(0.001)***	(0.000)***	(0.001)***	(0.000)***
# Adult Males	0.013	0.026	-0.002	-0.015	-0.007	-0.006
	(0.376)	(0.213)	(0.918)	(0.369)	(0.679)	(0.766)
Observations	284	284	340	340	387	387

*Robust p values in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%*

standard errors clustered by Households

Table 12: Pooled Probit Estimation: Marginal effects

Probability of Going Out on Primary Work (Pooled Estimation)

Derivative w.r.t.		1983-2008	1993-2008
Dummy 2008	Average	-0.18 (0.00)***	0.02 (0.59)
	Murao/Passi	-0.38 (0.00)***	-0.06 (0.13)
	Thakur	-0.09 (0.29)	-0.02 (0.81)
	Dhimar	-0.11 (0.42)	0 (0.97)
	Gadaria	-0.19 (0.18)	0.25 (0.003)***
	Muslim	0.01 (0.86)	0.12 (0.16)
	Jatab	-0.08 (0.48)	0.05 (0.57)
	Others	-0.36 (0.03)**	-0.1 (0.55)

Table 13: Pooled Probit Estimation: Any work

Probability of Going Out on Any Work (Pooled Estimation)

Derivative w.r.t		1983-2008	1993-2008
Dummy 2008	Average	-0.13 (0)***	0.05 (0.15)
	Murao/Passi	-0.24 (0)***	0.05 (0.36)
	Thakur	-0.02 (0.83)	0.07 (0.37)
	Dhimar	-0.13 (0.29)	0.01 (0.89)
	Gadaria	-0.24 (0.05)**	0.25 (0.013)**
	Muslim	0 (0.97)	0.04 (0.68)
	Jatab	-0.13 (0.21)	-0.03 (0.76)
	Others	-0.32 (0.08)*	-0.13 (0.47)

Table 14: Various activities in each Classification

Casual Lab (NON AGR)	**Regular(skilled)**	**Semi-regular(skilled)**
Bakery	Compounder	Car Driver
Brick Kiln	FSS clerk	Compounder
Cereal Shop	Insurance Agent	Cook
Construction	Railway	Electricity Meter
Labour	Teacher	Guard
Malgodaam	Utensil Factory	Shop worker
Marble Polishing		Steel Factory
Rikshaw puller	**Regular(unskilled)**	**Semi-regular(unskilled)**
Sac Repairing	Bank Cashier	Assistant
Tile polishing	Gas Hawker	Brick Kiln
Tractor Driving	Guard	Guard
	Metal Polishing	Tailor
Self-employed	Paper mill	shop worker
Shops	Railway	
Doctor	Shop worker	
Marble Polishing operators	Utensil Factory	
Mason	Guard	
Engine Repairing		

Table 15: Probit Estimation of Outside Casual Non Farm

CASUAL NON AG OUTSIDE PALANPUR: PRIM OCCU

	1983	1993	2008
Age	-0.000	-0.001	-0.001
	(0.821)	(0.049)**	(0.235)
Muslim	0.012	0.012	0.012
	(0.093)*	(0.674)	(0.767)
Jatab	0.006	0.030	0.126
	(0.434)	(0.304)	(0.006)***
Education	-0.002	-0.001	-0.002
	(0.069)*	(0.572)	(0.471)
Land Owned	-0.0004	-0.002	-0.002
	(0.086)*	(0.244)	(0.156)
Adult Males	-0.004	-0.012	-0.013
	(0.031)**	(0.085)*	(0.183)
Observations	284	340	387

Robust p values in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 16: Probit Estimaton of Outside Self Employment

SELF EMP OUT	(1)	(2)
	1993	2008
age	0.000	0.000
	(0.239)	(0.581)
education	-0.000	-0.000
	(0.632)	(0.876)
land_own	-0.000	-0.002
	(0.115)	(0.074)*
adult_males	-0.001	-0.002
	(0.000)***	(0.786)
Thakur	0.001	0.163
	(0.527)	(0.003)***
Murao	0.002	
	(0.304)	
Dhimar	0.001	0.090
	(0.326)	(0.143)
Gadaria		0.389
		(0.000)***
Teli		0.276
		(0.001)***
Others		0.161
		(0.123)
Observations	340	387

Robust p values in parentheses:* significant at 10%; ** significant at 5%; *** significant at 1%

Table 17: Probit Estimation of Outside Regular Job

REG OUTSIDE	1983	1993	2008
age	-0.001	0.001	0.002
	(0.231)	(0.016)**	(0.002)***
education	0.013	-0.000	0.006
	(0.003)***	(0.787)	(0.002)***
land_own	-0.004	-0.003	-0.002
	(0.003)***	(0.017)**	(0.017)**
adult_males	0.000	0.007	0.005
	(0.994)	(0.425)	(0.235)
Thakur	0.152	0.022	0.138
	(0.142)	(0.598)	(0.005)***
Murao	0.099	0.023	0.027
	(0.380)	(0.617)	(0.472)
Dhimar	0.179	0.092	0.091
	(0.151)	(0.077)*	(0.073)*
Gadaria	0.302	-0.005	0.057
	(0.035)**	(0.926)	(0.321)
Teli	0.029	0.032	0.153
	(0.772)	(0.515)	(0.009)***
Passi	0.286	0.039	
	(0.039)**	(0.498)	
Jatab	-0.047		
	(0.621)		
Observations	284	340	387

Table 18: Pooled Estimation: Outside Regular Jobs

Regular Outside Job		1983-2008	1993-2008
Marg Eff			
Dummy 2008	Thakurs	-0.18 (0.01)***	0.05 (0.23)
	Dhimar	-0.23 (0.03)**	-0.1 (0.12)
	Gadaria	-0.34 (0)***	-0.01 (0.86)
	Teli	-0.03 (0.62)	0.0001 (0.99)
	Others	-0.16 (0)***	-0.03 (0.08)*

Table 19: Probit Estimation of Semi regular Outside work

SEMI REG OUT	1983	1993	2008
age	-0.002	-0.001	-0.000
	(0.002)***	(0.051)*	(0.398)
education	0.003	-0.001	0.001
	(0.015)**	(0.579)	(0.403)
land_own	-0.001	-0.002	-0.002
	(0.016)**	(0.042)**	(0.000)***
adult_males	0.006	0.010	-0.000
	(0.091)*	(0.101)	(0.945)
Thakurs	-0.005	0.121	0.016
	(0.823)	(0.002)***	(0.435)
Murao	-0.008		0.006
	(0.649)		(0.738)
Dhimar		-0.008	-0.005
		(0.800)	(0.801)
Gadaria	0.016	0.011	0.015
	(0.638)	(0.759)	(0.575)
Teli	0.026	0.012	-0.007
	(0.327)	(0.736)	(0.677)
Passi	0.156	0.047	
	(0.000)***	(0.310)	
Jatab	0.078		
	(0.052)*		
Observations	284	340	387

Robust p values in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%

Table 20: Out Migration of Complete Households

OUT MIGRATION OF COMPLETE HISTORY (No of Households)	1962-63 (INCL DEATH)	1974-75 (INCL DEATH)	1983-84 (INCL DEATH)	1993 (Not including natural attrition)	2008 (Not including natural attrition)	2008 (INCL "NATURAL ATTRITION")
Thakur	0	1	2	3	6	7
Murao	0	3	0	0	6	6
Dhimar	2	1	0	4	1	2
Gadaria	0	1	1	0	1	4
Dhobi	1	1	0	1	0	0
Teli	0	0	0	0	1	1
Passi	0	6	0	2	7	9
Jatab	3	0	0	0	4	4
Others	3	2	1	2	1	1
TOTAL	9	15	4	12	27	34

Table 21: Status of Households: Migration

STATUS	1993 Households in 2008		1983 Households in 1993	
	Freq.	Percent	Freq.	Percent
FULL HOUSE MARRIED OUT OR DEAD	7	4	2	1
NO MEMBER MIGRATED	103	55	112	78
SOME (BUT NOT ALL) MEMBER MIGRATED	52	28	18	13
WHOLE HOUSE MIGRATED	27	14	12	8
TOTAL	189	100	144	100

Table 22 : INDIVIDUAL MALE MEMBERS (ABOVE AGE 15 IN BASE YEAR)

Caste	1993-2008			1983-1993	
	% Migrated by 2008 (All Reasons)	% Migrated by 2008 (For Employment)	Total 15+ Males	% Migrated by 1993 (All Reasons)	Total 15+ Males
Thakur	25	21	77	9	66
Murao	15	14	81	0	68
Dhimar	12	12	33	24	25
Gadaria	7	4	28	10	21
Dhobi	0	0	9	0	7
Teli	6	6	34	3	30
Passi	63	63	19	31	26
Jatab	20	17	46	3	32
Others	23	23	13	45	11
Total	19	17	340	10	284

Table 23: Determinants of Migration

Probability of Migrating	(1)	(2)
	1983-1993	1993-2008
Dhimar/Gadaria/Others	0.003	-0.078
	(0.468)	(0.084)*
Muslims (Dhobi/Teli)	-0.004	-0.125
	(0.018)**	(0.024)**
Passi	0.041	0.273
	(0.103)	(0.012)**
Jatab	-0.003	-0.043
Reference Category: Thakur/Muraos		
	(0.074)*	(0.423)
Regular/Semi Regular Jobs in Base Year	-0.009	0.000
	(0.028)**	(0.993)
Self Employment in Base Year	0.002	0.033
	(0.718)	(0.711)
Casual Year in Base Year	-0.001	0.072
	(0.625)	(0.405)
Other/Study/None		0.054
		(0.297)
Reference Category: Cultivators in Base Year		
Land Ownership Base Year	-0.001	-0.004
	(0.000)***	(0.052)*
Household size in Base Year	0.001	0.006
	(0.068)*	(0.401)
Age	-0.00001	-0.004
	(0.003)***	(0.000)***
Education	0.001	0.002
	(0.045)**	(0.466)
Worked Outside in Base Year	0.022	-0.172
	(0.019)**	(0.001)***
Observations	222	336

Robust p values in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%