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## ***Rural Labor Markets and the Non-Farm Economy in Madagascar: 2001-2005<sup>i</sup>***

### ***Introduction & Summary***

Life in Madagascar is rural. With 78 percent of the population, and more than 80 percent of the poor living in rural areas (INSTAT, 2006), understanding the rural economy is essential to understanding poverty in this Indian Ocean country. Further, because the poor derive most of their income from their unskilled labor – the one asset that they own in abundance – understanding rural labor markets is essential to understanding the rural economy.

Despite the fact that most people in rural Madagascar work full time, their earnings are typically insufficient to support their families (Stifel, et al., 2007). The challenge to helping the poor to escape poverty is thus to either increase labor productivity in agriculture where 89 percent of the rural workers are employed, or create opportunities for employment in high return nonfarm activities, or both.

The nonfarm sector is often seen an important pathway out of poverty (Lanjouw, 2001) and may indeed be so for Madagascar. An empirical regularity emerging from studies of the nonfarm economy in developing countries is that there exists a positive relationship between nonfarm activity and welfare on average (Barrett, et al., 2001).

This brief highlights the main findings of a study that assesses the labor market conditions and the importance of the nonfarm economy in rural Madagascar in 2005 (Stifel, 2007). The key messages coming out of the analysis are:

- Despite the predominance of agriculture, nonfarm employment activities are important. Nearly 20 percent of active adults in rural areas are employed in some form of nonfarm activities.
- The nonfarm sector may provide an important pathway out of poverty. The percentage of workers with nonfarm employment rises by expenditure quintile,

with 11 percent in the poorest quintile and 31 percent in the richest quintile employed in this sector, respectively.

- Earnings are highest for nonfarm wage employment. With a median of Ar 78,000 per month, earnings for nonfarm wage workers are more than double those of all other employment types.
- Households adopting livelihood strategies that include some nonfarm employment are generally better off than those that rely more on agriculture.

Livelihood Strategy	% Poor
1. Any agricultural wage activities	83
2. Family farming only	75
3. Family farming combined with nonfarm activities	69
4. Nonfarm activities only	39

- Barriers limit households' abilities to adopt superior strategies that include nonfarm employment. These barriers include limited education and lack of access to credit and external communication (e.g. radio and telecommunication).
- Although these barriers may mean that high-return strategies are limited to a subpopulation of well-endowed households, the nonfarm sector can still benefit the poor by providing a means of mitigating and/or coping with agricultural crop and price risk.
- Policies aimed at improving the rural labor markets must therefore be two-pronged. They must (1) improve agricultural productivity, and (2) address the obstacles that rural workers face in the non-farm economy.

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## ***Why is the Rural Nonfarm Economy Important?***

Nonfarm employment has the potential to...

- reduce inequality
- absorb a growing rural labor force
- slow rural-urban migration
- contribute to growth of national income.

In addition, nonfarm activities can provide an important form of income diversification to reduce risk, especially among agricultural households whose livelihoods are vulnerable to climatic uncertainties. In principle, diversification could be accomplished through land and financial asset diversification. But, the absence of well-functioning land and capital markets often means that these diversification strategies are not yet feasible. Consequently, many rural households find themselves pursuing second-best diversification strategies through the allocation of household labor. Household labor supply/allocation decisions among farm and

nonfarm activities are thus made by weighing both productivity and risk factors.

Thus there exist both *push* and *pull* factors that influence the choices made by households regarding nonfarm employment. First, there is an incentive, or *push*, for households with limited assets and who live in risky agricultural zones to allocate household labor to nonfarm activities. Although households frequently do turn to the nonfarm sector as a risk mitigation strategy, distress diversification into low-return nonfarm activities is also observed as risk coping reaction to low farm income. In this way, there are benefits to low-return nonfarm activities which serve as a type of “safety net.” Second, such factors as higher earnings from high productivity/high income activities may attract, or *pull*, some household labor into nonfarm employment. These high-return nonfarm jobs may serve as a genuine source of upward mobility.

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## ***Labor Market Conditions***

Rural labor markets in Madagascar are characterized predominantly by agricultural activities. Some 93 percent of economically active adults (age 15-64) are employed in agriculture in some form or another whether they are primary or secondary jobs (Table 1).<sup>1</sup> Among primary jobs, 89 percent are agricultural, nearly all of which involved non-wage work on the family farm. Only 4 percent are wage positions. Further, 71 percent of second jobs (held by 32 percent of all employed adults) are in agriculture. Unlike primary jobs, however, secondary jobs in agriculture are more likely to be wage positions (64 percent).

Nearly 20 percent of active adults in rural areas are employed in some form of nonfarm activities, 90 percent of which are in the service sector. While only 11 percent of first

jobs are in the nonfarm sector, 29 percent of second jobs are non-agricultural. Women are more likely to take up nonfarm activities for their second jobs than men. In the nonfarm sector, women are also more likely to be found working in nonwage activities. Nearly all nonfarm employment is in the service sector (89%), and women are more likely to provide service sector jobs than men (93% vs. 83%).

A positive relationship exists between rural nonfarm employment and household wellbeing as measured by per capita household expenditure. The percentage of workers with nonfarm employment rises by expenditure quintile, with 11 percent in the poorest quintile and 31 percent in the richest quintile employed in this sector, respectively.

**Table 1: Employment in Rural Madagascar**

<i>Percent with either 1<sup>st</sup> or 2<sup>nd</sup> job in...</i>	<b>Farm</b>	<b>Nonfarm</b>
All active adults	93	20
<i>Expenditure Quintile</i>		
Poorest	97	11
Q2	95	17
Q3	96	16
Q4	93	23
Richest	84	31

Source: Stifel (2007)

As illustrated in Table 2, median monthly earnings for nonfarm wage workers (Ar 78,000) are more than double those not only in the farm sector (Ar 31,000 for non-wage, and Ar 38,000 for wage), but also those in the nonfarm non-wage sector (Ar 37,000).

The differences in nonfarm earnings suggest that individuals may indeed be pressed into nonfarm non-wage employment as part of household income diversification strategies

designed to reduce risk. Since it is not clear that earnings alone are enough to attract individuals to this sector, *push* factors such as land constraints, risky farming and weak or incomplete financial systems may instead be the forces compelling households to diversify their income sources by allocating household labor to nonfarm non-wage employment. Conversely, *pull* factors such as higher earnings appear to be attracting labor to the nonfarm wage.

**Table 2: Median Monthly Earnings in Rural Madagascar**

<i>Thousands of Ariary</i>	<b>Farm</b>			<b>Non Farm</b>		
	<b>Non Wage</b>	<b>Wage</b>	<b>Total</b>	<b>Non Wage</b>	<b>Wage</b>	<b>Total</b>
<b>All First Jobs</b>	31	38	<b>31</b>	37	78	<b>67</b>
<i>Expenditure Quintile</i>						
Poorest	17	36	<b>18</b>	25	48	<b>28</b>
Q2	26	38	<b>27</b>	21	66	<b>41</b>
Q3	31	38	<b>32</b>	32	69	<b>47</b>
Q4	39	42	<b>39</b>	37	78	<b>63</b>
Richest	58	44	<b>58</b>	67	100	<b>89</b>
<i>Education Level</i>						
None	29	37	<b>30</b>	28	49	<b>36</b>
Primary	33	42	<b>33</b>	26	72	<b>48</b>
LowSecondary	41	37	<b>40</b>	70	89	<b>84</b>
UpperSecondary	45	29	<b>45</b>	75	100	<b>91</b>
PostSecondary	38	..	<b>45</b>	195	150	<b>151</b>

Source: Stifel (2007)

The strikingly strong positive relationship between educational attainment and earnings from nonfarm activities in Table 2 suggests that a lack of skills and education may prevent the poor from benefiting from high-return nonfarm activities. Not only are fewer individuals with lower levels of education employed in the nonfarm sector (e.g. 6 percent

of those with no education, compared to 44 percent of those with upper secondary and 73 percent with post secondary education, respectively), but their nonfarm earnings range from one-third to one-fifth of the nonfarm earnings of those with higher levels of education.

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## Household Livelihood Strategies

Household income sources are more diversified than individual income sources and households adopting livelihood strategies that include at least one person working in the nonfarm sector are generally better off. Further, households that are compelled to seek agricultural wage earnings are generally worse off than all other groups.

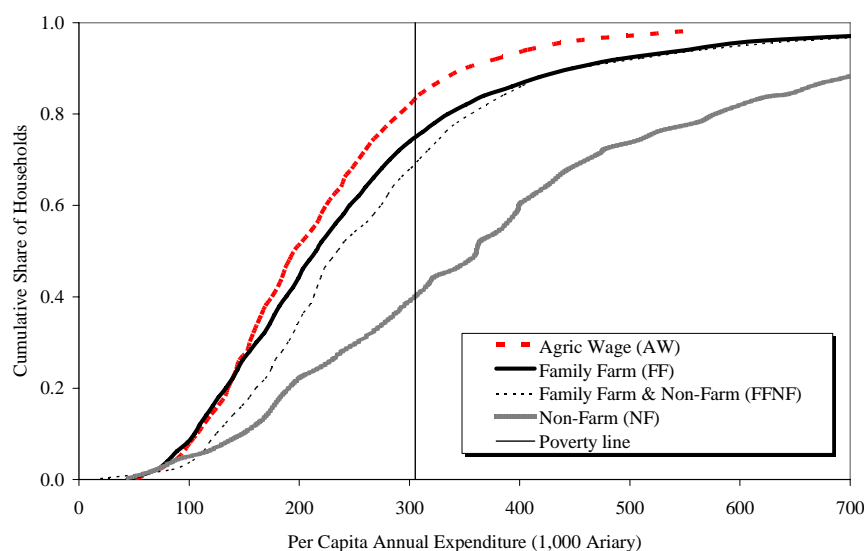
To illustrate this, four household livelihood strategies are identified in such a way that they can be ordered in welfare terms and the distributions of household per capita expenditure are plotted in Figure 1 for each household type. These strategies are

- a) AW: Any member employed as an agricultural wage earner (24 percent of individuals),
- b) FF: Family farming only (48 percent),
- c) FFNF: family farm and nonfarm activities (23 percent),
- d) NF: Nonfarm activities only (5 percent).

As illustrated in Figure 1, poverty rates are lowest for households adopting NF strategies (39 percent), and are highest for those resorting to AW strategies (83 percent). There is a clear ordering in terms of poverty rates – AW strategies are the most inferior followed by FF, FFNF and then by NF strategies. Moreover, this ordering holds for a wide range of potential poverty lines (i.e. between Ar 120,000 to Ar 375,000). In other words, households that adopt strategies that include some form of nonfarm employment are better off.

The evidence that there exist superior household livelihood strategies associated with nonfarm employment begs the question as to why so few rural households choose the dominant strategies (5 percent for NF and 22 percent for FFNF). The underlying question that follows from this is what barriers are preventing households from adopting these strategies.

Figure 1: Distributions of Household Expenditure in Rural Madagascar



Statistical estimates of the determinants of household strategy choice reveal three potential barriers to participation in high return nonfarm activities. These barriers are (1) limited educational attainment, (2) lack of access to credit, and (3) limited external communication (e.g. radio and telecommunications).

First, household with higher levels of educational attainment tend to be those who choose the dominant NF and FFNF strategies. The consequence is that poor households with low levels of education generally face greater barriers than the nonpoor in their choices of high-return livelihood strategies.

Second, households without access to formal credit tend to adopt inferior strategies, and are less likely to combine family farming with nonfarm activities.

Third, households with access to forms of communication (telephone and radio) – and by extension information on price and market conditions outside of the community – have a

greater likelihood of choosing the dominant livelihood strategies. Households living in communities without such access are more likely to allocate labor to farming activities that are geared toward home consumption and the local market – i.e. those activities that are likely to have lower remunerative rewards.

Although these barriers may mean that high-return strategies are limited to a subpopulation of well-endowed households, the nonfarm sector can still benefit the poor.

On the one hand, entry barriers limit the accessibility of those with limited asset endowments to high-return nonfarm activities (e.g. wage sector). On the other hand, low-return nonfarm activities tend to provide opportunities for *ex ante* risk reduction, as well as for *ex post* coping with shocks. The nonfarm nonwage sector tends to play this “safety-net” role in Madagascar. In addition, nonfarm activities may also have an indirect effect on poverty by affecting agricultural wages.

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### ***Policy Implications***

Given the employment structure in rural Madagascar, policy issues revolve around improving the quality – not just the quantity – of employment. The challenge is thus to either increase labor productivity in agriculture where 89 percent of the rural workers are employed, or create opportunities for employment in high return nonfarm activities, or both.

Thus policies aimed at improving rural labor market conditions need to be two-pronged. First, efforts to improve agricultural productivity, which has stagnated over the last 20 years, will go a long way to improving the livelihoods of rural residents who rely largely on the one asset that they own in abundance – their own unskilled labor.

Second, the rural non-farm sector is an important pathway out of poverty. Addressing the obstacles that rural workers face in this sector (e.g. insufficient skills, and lack of credit and limited external information) can contribute not only to the growth of national income, but to absorbing a growing rural labor force. In addition, increased nonfarm employment may tighten agricultural wage markets leading to higher wages that are an important source of income for the poorest households.

## ***Appendix - Definitions***

Employed:	Individual of working age (15-64) who has a permanent job or worked at least one hour in past week.	Agriculture:	In addition to cropping, agriculture includes livestock husbandry, fishing and forestry.
Wage Employment:	Individual works for a wage or a salary.	Nonfarm:	Nonagricultural activities such as mining, manufacturing, commerce, transportation, government administration, and other services. Note that although agroprocessing is closely linked to agriculture, it is classified as nonfarm.
Non-Wage Employment:	Individual works for a wage or a salary.		

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<sup>1</sup> This policy brief was prepared by David Stifel (Lafayette College).

<sup>1</sup> The household survey data used for this analysis are the 2005 *Enquête Périodique auprès des Ménages* (EPM) collected by the Institut National de la Statistique (INSTAT).