

Chapter 11

General conclusions of socio-economic research in Tunisia

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11.1. General analysis

Table 11.1 indicates that the percentage of the population that is never absent is relatively high. This could be explained by the success of migration control measures. The low percentage of current international migrants, particularly at Mareth 2, is due to the complexity of migration formalities for young people. Returned migrants are mostly former external migrants.

Mean annual income per household varies between 4,470 and 6,029 DT for the three oases. As far as migration status is concerned, migrant household income is significantly higher than that of non-migrants. For migrants it is 8,225 DT at Mareth1, 8,142 DT at Mareth2 and 6,780 DT at Fatnassa. For non-migrants, it is 4,773 DT, 3,692 DT and 3,608 DT for Mareth1, Mareth2 and Fatnassa, respectively (see table 11.2).

Table 11.1 Migrants related to total population in the Tunisian oases (Fatnassa and Mareth)

<i>Types of migration</i>	<i>Mareth1</i>	<i>Mareth2</i>	<i>Total</i>	<i>Fatnassa</i>
Never absent	87.2	90.2	88.3	86
absent (in Tunisia)	0.8	0.8	0.8	6.7
absent (abroad)	7.8	0	4.7	2.7
Internal remigrant (Tunisia)	2.1	0	1.3	1.2
External remigrant	2.1	9	4.9	3.4
Total	100%	100%	100%	100%

Table 11.2 Mean household income (DT/year)

	Mareth1		Marth2		Total		Fatnassa	
	Mean	N	Mean	N	Mean	N	Mean	N
Non migrants	4.773.64	39	3.692.38	34	4.270.09	73	3.608.52	67
Migrants	8.225.45	22	8.142.61	23	8.197.78	45	6.780.00	25
Total	6.029.38	61	5.488.09	57	5.767.91	118	4.470.34	92

Comparative analysis between the Tunisian sites shows a diverse situation between different oases, as well as between migrants and non-migrants despite relatively important similarities. In fact, concerning 'non-productive' investments (such as housing), table 11.3 reveals that migrants invest more than non-migrants. An exception has to be made for Mareth 2 however, where migrants invest less because they prefer saving over investing. The inter-oases comparison (table below) shows that migrants and non-migrants of Mareth invest more than those at Fatnassa. The non-migrants of Mareth and Fatnassa invest 6,041 DT/year and 3,715 DT/year, whereas migrants spend 9,093 DT/year and 6,468 DT/year, respectively.

Table 11.3 Non-productive investments (DT/year)

	Mareth1		Marth2		Total		Fatnassa	
	VN	Mean	VN	Mean	VN	Mean	VN	Mean
Non migrants	34	2,522	15	5,224	53	6,041	66	3,714.8
Migrants	25	8,899	22	2,900	47	9,093.75	25	6,468
Total	59	5,224	41	2,945	100	7,785.71	91	4,471.2

Table 11.4. Consumption expenses (DT/year)

	Mareth1		Marth2		Total		Fatnassa	
	VN	Mean	VN	Mean	VN	Mean	VN	Mean
Non migrants	41	2,084	34	3,160	75	2,571.8	67	2,351
Migrants	25	4,330	23	4,202	48	4,969	25	3,490
Total	66	2,935	57	3,580	123	3,234	92	2,661

As far as the consumption budget is concerned, it was found that migrants allocate a higher budget to cover their consumption needs than non-migrants. In fact, and as observed in the table below, the household consumption budget of Mareth is higher than that of Fatnassa for migrants and non-migrants alike. According table 11.5, the household investment budget of migrants is almost identical between Mareth and Fatanassa. However, the non-migrants of Mareth allocate a greater annual budget (2,283 DT/year) compared to the non-migrants of Fatnassa (1,264 DT/year).

Table 11.5. Comparative analysis of investments (DT/year)

	Mareth1	Marth2	Total	Fatnassa
Non migrants	1,810	3,314	2,283	1,264
Migrants	2,188	2,750	2,413	2,329
Total	1,972	3,020	2,343	1,585

The comparison of oases with regard to farming equipment shows a spatial diversity between coastal (Mareth) and continental (Fatnassa) oases. Whereas the migrant households of Mareth spend more on equipment than those of Fatnassa, the situation is reversed in the case of non-migrants. Investments in farming equipment by non-migrant households are estimated at 3,529 DT/year, 3,625 DT/year and 846 DT/year for Mareth 1, Mareth 2 and Fatnassa, respectively, whereas it is 3,937 DT/year, 2,625 DT/year and 582 DT/year for migrants, respectively. It has been revealed that the use of farming equipment for non-migrants in the Mareth 2 and Fatnassa oases is higher whereas the opposite case applies for Mareth 1.

Table 11.6. Investments in farming equipment (DT/year)

	Mareth1		Mareth2		Total		Fatnassa	
	Valid Number	Mean	Valid Number	Mean	Valid Number	Mean	Valid Number	Mean
Non migrants	10	3,529 (45)	11	3,625 (65)	14	3,557 (110)	48	846 (70)
Migrants	8	3,937 (10)	2	2,625 (15)	10	3,675 (25)	21	582 (60)
Total	18	3,710 (55)	6	3,291 (80)	24	3,606 (135)	69	766 (130)

The comparative analysis of standards of living has been performed by considering a number of indicators, such as housing and equipment. The analysis of these indicators, described in the following tables, confirms the general tendency whereby migrants are ranked higher for

all Tunisian oases. However, the gap between migrants and non-migrants is larger in the oasis of Fatnassa than in Mareth. This could be attributed to the fact that the standard of living in coastal regions is higher than that in the deep country regions. It should be noted that remittance earnings from emigration are only partially reinvested in agriculture. Migrants first give a higher priority to investing in construction and the equipment of households.

Table 11.7. Percentage of households possessing modern, concrete house

	Mareth1	Mareth2	Fatnassa
Nonmigrants	79	8.7	12
Migrants	80	0	40
Total	79.7	3.4	20

Table 11.8 Percentage of households possessing phone

	Mareth1	Mareth2	Fatnassa
Nonmigrants	15	8.6	4.5
Migrants	56	13	32
Total	30.8	10.3	12

Table 11.9. Percentage of households possessing television

	Mareth1	Mareth2	Fatnassa
Nonmigrants	80	97.1	98.5
Migrants	92	100	100
Total	84.6	98.3	98.9

Table 11.10. Percentage of households possessing VCR

	Mareth1	Mareth2	Fatnassa
Non migrants	20	2.9	1.5
Migrants	36	8.7	28
Total	26.2	5.2	8.7

Table 11.11. Percentage of households possessing satellite receiver

	Mareth1	Mareth2	Fatnassa
Non migrants	42.5	34.3	3
Migrants	80	43.5	20
Total	56.9	37.9	7.6

Table 11.12. Percentage of households possessing refrigerator

	Mareth1	Mareth2	Fatnassa
Non migrants	90	88.6	97
Migrants	100	100	88
Total	93.8	93.1	94.6

Table 11.13. Percentage of households possessing car

	Mareth1	Mareth2	Fatnassa
Non migrants	12.5	5.7	7.5
Migrants	28	8.7	16
Total	18.5	6.9	9.8

From a qualitative point of view, comparisons between the Tunisian sites showed that the housing types and standards of living of the population are on the whole at the same level for both migrants and non-migrants.

As is the case in Mareth, almost all the farmers of Fatnassa -- both migrants (98 percent) and non-migrants (96 percent) -- live outside the oasis, whereas 87.2 percent do so compared with 100 percent in Mareth and 77.1 percent do so against 87 percent in Mareth 2,

respectively. This means that only a few people continue to actually reside inside the oases. All farmers are in possession of their own housing, with the exception of 4 percent of migrants in Fatnasa, who are still in a situation of renting. Housings are of a traditional type, except for Mareth, where the tendency is towards the appropriation of modern villas. So, it is important to note that as regards housing, in Mareth1 there are no differences between migrants and non-migrants.

Both migrant and non-migrant's houses are equipped with sanitary blocks and kitchens. Almost all houses are connected to national water (SONEDE) and electricity (STEG) networks.

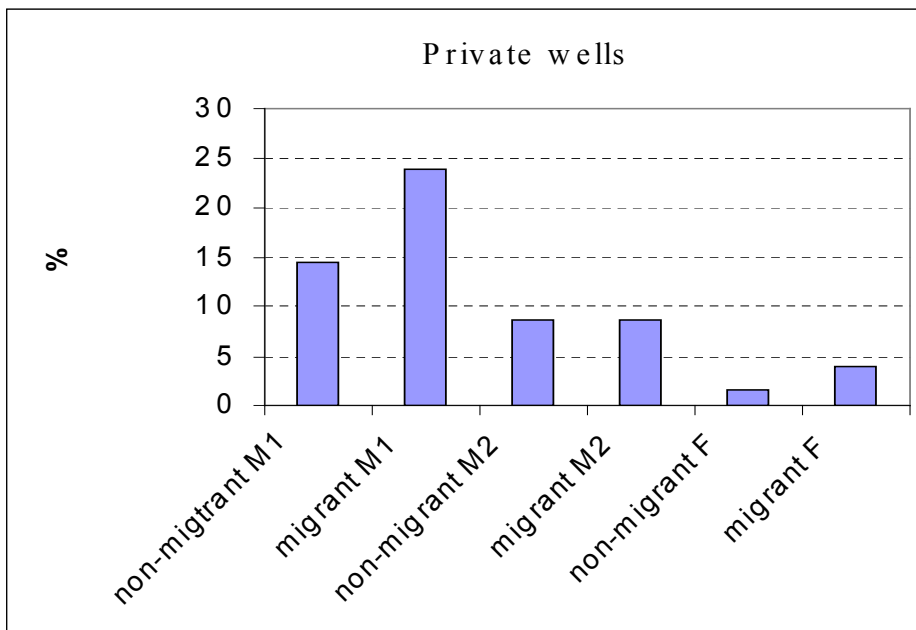
Table 11.14 Type of housing

	Mareth 1		Mareth 2		Fatnassa	
	non-migrant	Migrant	non-migrant	migrant	non-migrant	migrant
Hûch (traditional housing)			94.3	100	86.6	60
Rural housing	20.25	20	5.7		1.5	
Villa	79.5	80			11.9	40

11.2. Migration impacts on agriculture

Analysis revealed that arable land transactions are rather rare. They concern only limited cases in the continental oasis for both categories (migrants and non-migrants). With the exception of illicit extensions, all farmers enjoy right of access to collective water resources managed by the AIC. Nevertheless, some of them declare to have private wells, as is the case of the farming area of Sânia located near the oasis of Mareth1 (almost 25 percent) / (see figure 11.1). Many more farmers possess private water pumps, which are normally used for water extraction from 'drains' and/or shallow water tables (2 to 3 meters deep).

Figure 11.1: Percentage of households possessing private wells



An analysis of fodder purchases revealed changes in livestock husbandry. All farmers buy fodder to cover the needs of their livestock. The use of organic manure and fertilisers is practised by almost half of the farmers, with higher rates in Fatnassa due to the expansion of intensive, commercial date palm cropping. Chemical pest control is little practised. Paid agricultural labourers are particularly common in Fatnassa. (see table 11.15).

There are clear agricultural changes, particularly in the continental oasis of Fatnassa, where new crops and improved animal breeds have been introduced. However, these changes are not significant in the coastal oases. In Mareth, farming activities remain more or less in the traditional manner both for migrant and non-migrant households.

Table 11.15. Percentage of households that use agricultural inputs

	Mareth 1		Mareth 2		Fatnassa	
	non-migrant	migrant	non-migrant	migrant	non-migrant	migrant
Fodder	53.7	52	31.4	52.2	62.7	64
Organic manure	14.6	24	28.6	30.4	59.7	64
Fertilisers	2.4	12	48.6	52.2	71.6	96
Fungicide	0	0	5.7	0	0	0
Insecticide	2.4	0	5.7	4.3	0	0
Seeds	0	0	17.1	0	0	0
Paid labour	26.8	28	57.1	73.9	85.1	96

Table 11.16. Percentage of respondents perceiving agricultural changes

	Mareth 1		Mareth 2		Fatnassa	
	non-migrant	migrant	non-migrant	migrant	non-migrant	migrant
Crops	4.9	16	22.9	21.7	86.6	84
Livestock	0	8	0	0	22.4	20

Emigration certainly contributes to the agricultural development of the oasis. However, its impact is impeded by the scarcity of water resources, which are not freely accessible and regulated by the State. This fact obliges migrants to invest in buying old oasis farms or by engaging in illicit extensions. The fragmentation and scattering of plots represent another handicap to agricultural investment stemming either from emigration or from other sources. The low level of effectively organized sales channels also discourages investors, as palm dates are generally sold very cheaply at the producer level.

11.3 Recommendations

In spite of efforts deployed by the State to valorise emigration-derived earnings as a driving factor for development in general and agricultural development in particular, the results obtained remain on the low side of expectations. In order to improve this situation, it is necessary to act on two levels:

First, the state must incite migrants to transfer the maximum of their earnings in order to cope with agricultural development constraints within the oasis, while creating a better investment environment. One way to do this is to develop innovative and profitable activities, such as the exploitation of geothermal waters, eco-tourism or the stimulation of agro-food industries. On the other hand, it is necessary to solve problems related to water resource access and land ownership in order to incite investors to develop agricultural projects. This strategy may convince migrants to invest in profitable agricultural projects.

