

Migration – remittances - Development Nexus:

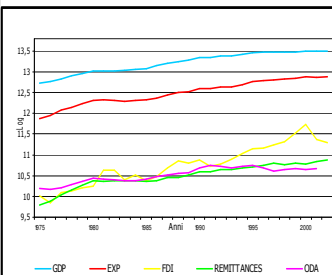
The case of Tunisian workers in Ancona (Italy)

macerata – 3rd may 2012

Motivation (1): The Aggregate Data

- from workers who have lived abroad for more than one year;
- compensation of employees or labour income, including wages and other compensation received by migrants who have lived abroad for less than one year;
- migrant's transfers, the net worth of migrants who move from one country to another.

Source: WDI data



Motivation (2): The Main Beneficiaries

1999		1970 - 1999	
Dollars	Countries	Dollars	Countries
11.500.505.088	India	102.357.504.512	India
5.909.000.192	Mexico	73.516.156.992	Portugal
4.528.999.936	Turkey	70.371.337.596	Egypt
3.772.400.128	Egypt	63.155.000.512	Turkey
3.343.469.960	Portugal	51.627.209.792	Mexico
3.335.685.888	Spain	42.754.393.872	Pakistan
1.938.105.984	Morocco	42.530.171.840	Spain
1.704.000.000	Bangladesh	34.675.000.512	Greece
1.664.000.000	Jordan	34.605.708.416	Morocco
1.518.700.032	Dominican Rep.	28.540.840.224	Italy
1.373.809.024	El Salvador	23.611.594.190	Jordan
1.301.057.024	Nigeria	21.767.109.376	Lebanon
1.235.219.328	Yemen	16.839.699.840	Bangladesh
1.190.000.000	Brazil	16.566.557.264	France
1.108.999.936	Indonesia	14.877.000.192	Brazil

Motivation (3): The Development Theory

- **Keynesian Model:** $C+I=Y=C+S$ (1)

- **Ohlin e Robertson:** $C+I=Y=C_t+S_{t-1}$ (2)

- **Harrod (1939) - Domar (1946) Model:** $s/\theta=g+\delta$ (3)

Where $s=S(t)/Y(t)$ (4) $\theta=K(t)/Y(t)$ (5)
 $g=[Y(t+1)-Y(t)]/Y(t)$ (6) $\delta=\text{Depr. Capitale}$ (7)

- **Two gaps Theory Model (Chenery & Bruno 1962):**

$$IS=S_p^*+(T-G)+(F-J) \quad (8) \quad IE=(1/m)[E^*+(F-J)] \quad (9)$$

Dove $IS=\text{savings gap}$ $IE=\text{foreign exchange gap}$

$$S_p^*=Y_p^*-C_p \quad (10) \quad (T-G)=\text{bilancio pub.} \quad (11) \quad (F-J)=\text{Net Cap. Transf.} \quad (12)$$

$$(1/m)=\text{Invest. in Import} \quad (13) \quad E^*=\text{Net Export} \quad (14)$$

Motivation (4): The Last Theory

Three gaps theory (Bacha, 1990):

- **IS = savings gap:** $IS=S_p^*+(T-G)+(F-J)$
- **IE = foreign exchange gap:** $IE=(1/m)[E^*+(F-J)]$
- **IT = fiscal gap:** $IT=(1+K^*)[f(p,h)+(T-G)+(F-J)]$

The Research:

- **Methodology of the research:**
 - Quali-quantitative Microeconomics research;
 - NELM (New Economics Labor Migration) Approach;
 - Means: Questionnaire;
 - Population interviewed: Tunisian migrants living and working in Ancona;
 - Instruments: Descriptive Statistics and Microeconometrics.
- **Obj:** Total amount and determinants of remittances and investment propensity;
Sub Obj:
 - Users and beneficiaries of remittances;
 - The role of remittances on the development process.
- **Expected results:**
 - "migration chain";
 - Consistent amount of remittances due: the characteristics of migrants and countries;
 - Determinants: Income, Welfare, Years in Italy;
 - Use: Consume, House and Investment;
- **Users:** Migrant, Wife, Children and Parents.

The New Economics of Labour Migration (NELM)

Motivation to migrate:

- a) Wage differential is not the only reason to leave rather it's a decision and effort made by the whole household (Mutual Informal Agreement);
- b) Get more benefits in DC (Social Policies - Welfare);
- c) Risk Diversification (Insurance);
- d) Remittances as self-financing (credit);

Determinants of remittances are: Income, willingness and motivation to share their welfare;

Impact at household level depends on: Amount, distribution and incidence of remittances;

Impact on local community is:

- a) Negative If the household lives as an enclave on the community;
- b) Positive If the household is integrated on the local community (prices, income, production, investment, multiplicative effects and development);

Impact on the distribution of income at community level:

1. The first migrants are coming from the rich families thus Increase of inequality;
2. The increasing of inequality push the relative poor family to increase their efforts to send one of them abroad (migrant syndrome), summed up with the reduction of the costs to migrate such as Transportation, Communication, risks and the Asymmetry of information reduce the inequality.

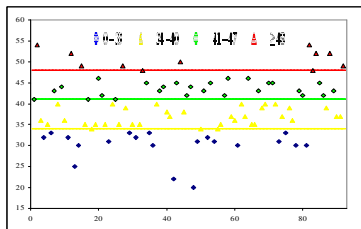
The Role of the Regularization in Italy

Year	n. of legal migrants resident in Italy	n. of application submitted by the migrants	Regularized	%
1980-82	331.665	5.000	5.000	100.00%
1986	450.227	113.349	105.000	92.63%
1990	490.338	234.841	222.000	94.53%
1995	729.159	258.761	246.000	95.07%
1998	1.090.820	250.747	217.000	86.54%
2002	1.512.324	704.000	650.000	92.33%
		1.566.698	1.445.000	

Characteristics of the Population

	n. case (a.v.)	Mean	Madja	Porter	Fisherman	Fishmonger
≤33	20	30,5	16	17,4%	0	20
34 - 40	35	37	30	32,6%	0	34
41 - 47	26	43,6	21	22,8%	1	22
≥ 48	11	50,7	9	9,8%	2	8
Sub total	92		76	82,6%	3	84
NA	9				2	4
Total	101				5	88
						101

Characteristics of the Population Interviewed



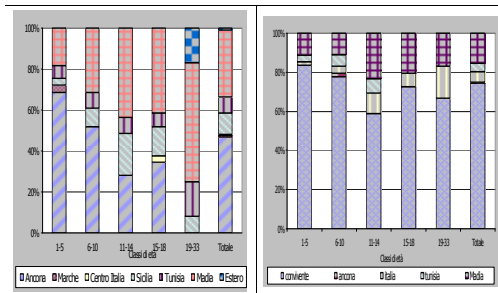
The Wives

	Place of birth..				..and ..				..Place of residing			
	Italy		Tunisia		Madia		Co-habitant		Italy		Tunisia	
	a.v.	%	a.v.	%	a.v.	%	a.v.	%	a.v.	%	a.v.	%
≤33	1	100,0	5	45,5	35	53,0	35	85,4	0	0,0	6	14,6
34 - 40	0	0,0	4	36,4	21	31,8	18	72,0	1	4,0	6	24,0
41 - 47	0	0,0	2	18,2	8	12,1	9	90,0	1	10,0	0	0,0
≥48	0	0,0	0	0,0	2	3,0	1	50,0	0	0,0	1	50,0
Total	1	1,3	11	14,1	66	84,6	63	80,8	2	2,6	13	16,7

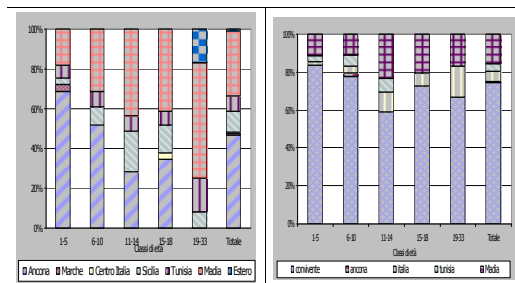
The Wives (2)

	v.a.	Wife	Variance	Husband	Variance
19-33	34	1998	18,28	1995	30,91
34-40	21	1992	22,76	1989	22,40
41-48	10	1987	9,16	1983	10,43
>48	1	1987	0,00	1981	19,62
Total	66	1994	33,19	1988	45,89

The Children: Place of Birth

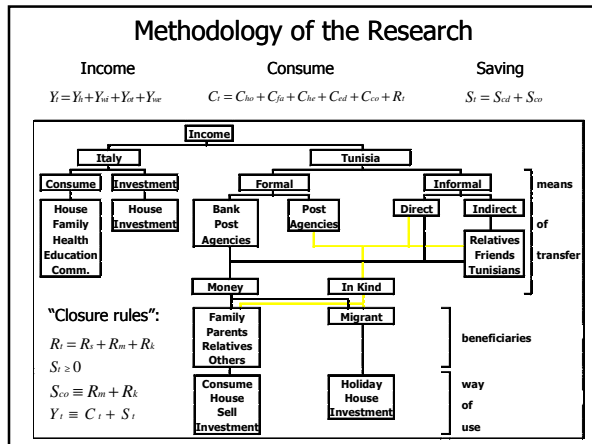


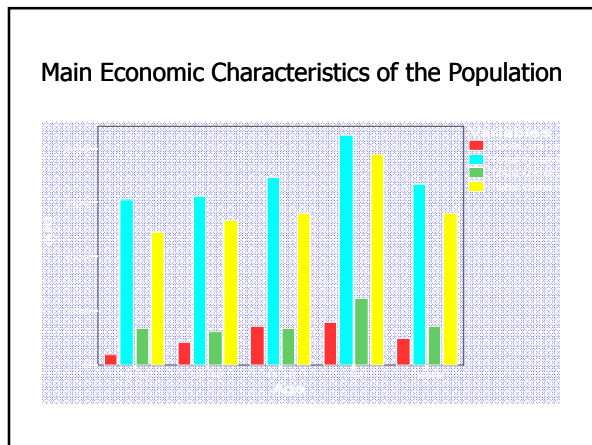
The Children: Place of living

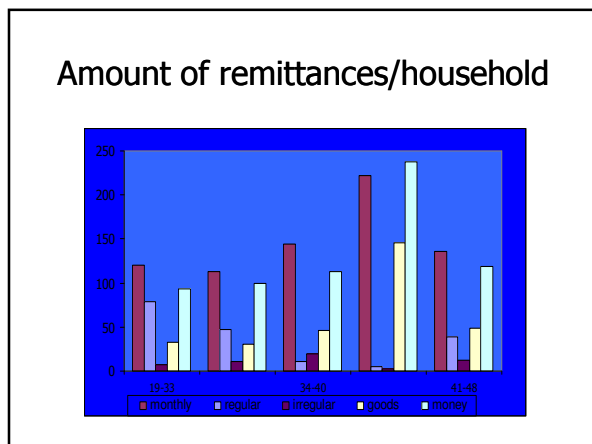


The family: A Demographic Aspect

	n. of case		25 years			30 years		
	v.a	%	v.a	v.a	%	v.a.	v.a.	%
≤33	20	21,7	3	18	16,7	5	17	29,4
34 - 40	35	38,0	0	35	0,0	14	35	40,0
41 - 47	26	28,3	2	26	7,7	13	26	50,0
≥ 48	11	12,0	0	11	0,0	4	11	36,4
Total	92	100,0						







Determinants of Remittances (1): Dependent variables

$$\text{Log}(R_i) = \beta_0 + \beta_1 \log(Y_{it-we}) + \beta_2 \log(Y_{it}) + \beta_3 \text{casa}_{pp} + \beta_4 \text{mgr} + \beta_5 \text{ingre}^2 + \beta_6 \text{cat}_{neg} + \dots$$

$$\dots \beta_7 S_{cd} + \beta_8 \text{Prog}_{cd} + \beta_9 \text{Con}_{co} + \beta_{10} \text{figli}_{co} + \beta_{11} \text{Inv}_{co} + \beta_{12} \text{beni}_{vend} + u$$

Dep. variables:	
<i>log(.)</i>	
<i>(monthly)</i>	Log (monthly remittances sent)
<i>(monthly_reg)</i>	Log (monthly and regular remittances sent)
<i>(tot_sent)</i>	Log (remittances sent)
<i>(money)</i>	Log (money taken in Tunisia)
<i>(goods)</i>	Log (goods taken in Tunisia)
<i>(money_goods)</i>	Log (money and goods taken in Tunisia)
<i>(total)</i>	Log (total remittances)

Determinants of Remittances: Independent Variables

Indep. Variables	
<i>log(Y_tot)</i>	Log (total net income);
<i>Y_we</i>	1 = receive welfare assistance; 0 = no;
<i>Publ_h</i>	1 = public house; 0 = private room or house;
<i>Year_it</i>	Number of year in Italy;
<i>(Year_it)²</i>	Number of year in Italy in quadratic form;
<i>Migr_ch</i>	1 = beneficiary of migration chain; 0 = no;
<i>S_it</i>	1 = saving in Italy; 0 = no;
<i>Proj_it</i>	1 = short migration project (< 6 year); 0 = medium - long migration project;
<i>Wife_Tu</i>	1 = wife resident in Tunisia; 0 = wife resident in Italy;
<i>Child_Tu</i>	Number of children resident in Tunisia
<i>Inv_Tu</i>	1 = investment in Tunisia; 0 = no;
<i>Goods_sold_Tu</i>	1 = Goods bought in Italy and sold in Tunisia; 0 = no

Determinants of remittances: The Results

Dep. Variables:	log(Remittances)						
	(monthly)	(monthly + reg)	(tot_sent)	(money)	(goods)	(money + goods)	(total)
Ind. Variables:	Coefficients						
<i>log(Y_tot)</i>	0.519*** (0.27)	0.538*** (0.28)	0.563*** (0.31)	0.620** (0.28)	1.270* (0.34)	0.835* (0.28)	1.084* (0.258)
<i>Y_we</i>	-0.355*** (0.20)	-0.355*** (0.20)	-0.644* (0.24)	-0.465** (0.19)			-0.580* (0.18)
<i>Publ_h</i>	-0.564* (0.199)	-0.536** (0.21)		0.648* (0.19)		0.475** (0.18)	0.325** (0.16)
<i>Year_it</i>	-0.0254*** (0.0147)		0.13* (0.0502)			-0.017 (0.012)	0.0645** (0.0381)
<i>(Year_it)²</i>			-0.0045* (0.0015)				-0.0025** (0.00109)
<i>Migr_ch</i>	-0.315*** (0.18)	-0.277 (0.17)		-0.232 (0.17)	-0.489** (0.22)		-0.396* (0.15)
<i>S_it</i>		-0.348*** (0.195)	-0.746* (0.21)				-0.444* (0.156)
<i>Proj_it</i>	1.574* (0.57)	1.385* (0.48)	1.62* (0.56)				0.886** (0.44)
<i>Wife_Tu</i>	1.108* (0.21)	1.113* (0.22)	1.11* (0.33)	-0.712** (0.29)			0.566** (0.25)
<i>Child_Tu</i>			0.265** (0.11)	0.289* (0.100)		0.135*** (0.073)	0.235* (0.086)
<i>Inv_Tu</i>			0.301*** (0.17)				0.248*** (0.146)
<i>Goods_sold_Tu</i>				0.453** (0.22)		0.604* (0.15)	0.366** (0.15)
C	2.02 (1.90)	1.85 (2.00)	0.87 (2.22)	-0.12 (2.11)	-5.13 (2.44)	-1.31 (1.96)	-2.27 (1.85)
n. of obs.	45	60	73	82	46	83	85
R ²	0.642	0.555	0.570	0.283	0.390	0.358	0.592

Investment in Tunisia

	19-33		34-40		41-48		>48		Total	
	n.	%	n.	%	n.	%	n.	%	n.	
Bought new house	15	88	22	95,7	12	85,7	7	100,0	56	91,8
Rebuilding old house	1	5,9	1	4,3	2	14,3	0	0,0	4	6,6
Furniture	1	5,9	0	0,0	0	0,0	0	0,0	1	1,6
Total	17	100,0	23	100,0	14	100,0	7	100,0	61	100,0

	19-33		34-40		41-48		>48		totale	
	v.a.	%	v.a.	%	v.a.	%	v.a.	%	v.a.	
Agriculture	3	75,0	3	100,0	0	0,0	1	25,0	7	43,8
Costruction building	0	0,0	0	0,0	4	80,0	3	75,0	7	43,8
Commerce	0	0,0	0	0,0	1	20,0	0	0,0	1	6,2
Services	1	25,0	0	0,0	0	0,0	0	0,0	1	6,2
Total	4	100,0	3	100,0	5	100,0	4	100,0	16	100,0

Investments in Tunisia: The Variables

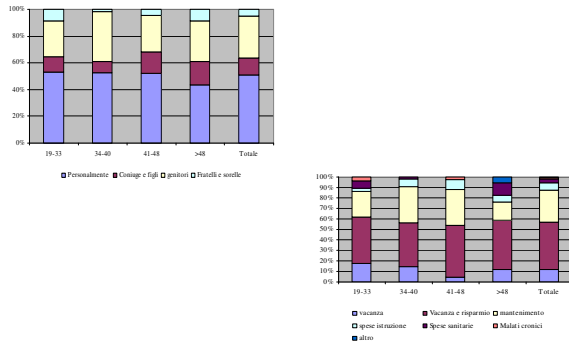
$$Inv = b_0 + b_1 \log(R_t) + b_2 R_{-k} + b_3 Year_It + b_4 Age + b_5 Age^2 + b_6 fam_{to} + b_7 educ + b_8 proj_{it} + u$$

Dependent variables:	
<i>Inv_Tu</i>	1 = past, present or future investment in Tunisia 0 = no
Independent variables:	
<i>log(R_Tot)</i>	Log (total remittances)
<i>R_{-k}</i>	1 = remittances in kind 0 = no
<i>Year_It</i>	1 = more than 19 years in Italy 0 = less than 19 years in Italy
<i>Age</i>	Variable quadratica
<i>Age²</i>	
<i>fam_Tu</i>	1 = family in Tunisia 0 = family in Italy
<i>Educ</i>	Grado di istruzione. 1 = more than 9 years education 0 = less than 9 year of education
<i>Proj_It</i>	Progetto migratorio attuale 1 = breve e medio 0 = per sempre

Investment in Tunisia: The Determinants

Independent variables: inv_tu									
Nk - Binary Logit									
Inf. variable	Coefficient	SE	z-Stat	(p-value)	OR	OR	df/dx		
<i>log(R_Tot)</i>	0.431	0.403	2.294	0.322	0.224	2.528	0.211	**	
<i>R_{-k}</i>	1.285	0.402	3.196	0.393	0.339	3.615	0.291	***	
<i>Year_It</i>	2.334	0.812	2.628	0.303	0.514	8.451	0.483	*	
<i>fam_Tu</i>	0.157	0.763	0.206	0.337					
<i>Age</i>	-1.355	0.463	-2.893	0.323	0.214	0.247	-0.229	***	41
<i>Age²</i>	0.0129	0.00534	2.308	0.327	0.30311	1.012	0.02292	***	
<i>Educ</i>	-1.110	0.433	-1.754	0.2715	0.237	0.370	-0.251	***	
<i>Proj_It</i>	2.827	0.991	2.844	0.341	0.438	7.510	0.463	**	
<i>C</i>	12.66	8.783	1.44	0.3456					
N of obs.									
Log-likelihood									
S									
S ² inv									
S ² inv									
Pseudo R ²									

Beneficiaries of Remittances



Conclusions (1)

The NELM still the best approach for this kind of research however doesn't take into account the role of the migrants as a linkage between their countries of origin and destination ("*Transnationalism*") and the role of the *network* ("*migration chain*");

- Determinants of remittances:
 - Income,
 - Consume
 - Welfare (council house),
 - Residence of the family (wife and children),
 - Years in Italy,
 - Migration project.
- Determinants of Investment in Tunisia:
 - ✓ Total remittances,
 - ✓ Remittances in kind,
 - ✓ Year in Italy,
 - ✓ Migration project,
 - ✓ Age,
 - ✓ Education.

Conclusions (2)

- Egoistic then altruistic behaviour (parents);
- crowding-out effect of remittances and investment (house building);
- needs an *ad hoc* policies for a better use of remittances:
 - ➔ Savings gap → banking account in hard currencies (e.g. Egypt),
 - ➔ Foreign gap → low inflation rate and real = nominal exchange rate,
 - ➔ Fiscal gap → free and developed national bond market;
- CGE-SAM (Computable General Equilibrium with Social Accounting Matrix) or ABM (Agent Based Model).