ESSAYS ON MIGRATION AND HOUSEHOLD LEFT BEHIND

A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE

FELLOW PROGRAMME IN MANAGEMENT

INDIAN INSTITUTE OF MANAGEMENT

INDORE

BY

Pooja Batra

(Economics)

March, 2021

Thesis Advisory Committee

Prof. Ajay Sharma [Chair]

Prof. Karthikeya Naraparaju
[Member]

Prof. Sneha Thapliyal
[Member]

ABSTRACT

Over the decades, about millions of people have been migrating within and outside their country in the pursuit to broaden their horizons of livelihood. Traditionally migration was viewed as "diversifying risk", preventing "economic shocks" and "liquidity constraints" through remittances (Lucas and Stark, 1985; Stark and Bloom, 1985). Hence economically benefitting the family members left behind. But there is more to this story the impact that migration and remittances has on its family members at origin in terms of education, nutrition, health, social status, decision making role and asset accumulation which is crucial for the well- being of a household. India has been the predominant origin of migrants, with 17.5 million international migrants, India ranks the top among the countries of origin across the globe (International Migration Report, 2019). Consequently, India is also one of the topmost recipients of international remittances ($79 billion) in the world contributing 2.9 percent to the GDP in 2018. In this dissertation, using various Kerala Migration surveys, we intend to explore the role of migration and remittance on the household left behind from various aspects.

The first essay aims to examine the impact of internal and international migration on the well-being of households left behind. We measure the impact of migration on household through indicators such as monthly consumption expenditure; monthly consumption expenditure on food; share of food expenditure and the diet diversity measures. Prior studies do document that migration contributes to consumption expenditure and affects its distribution in various ways through enhanced income, access to information about various good practices for improved health outcomes and exposure to diversity of food and to consumption smoothing and productive capital investments (Edwards and Ureta, 2003; Quartey, 2006). In this essay, we contribute to a large stream of literature on migration and well-being by analyzing the relative roles of internal and

international migration. Additionally, we intend to provide estimates of returns to internal and international migration at the household level. Using the Kerala migration survey 2011, we study whether households with out-migrants (internal migration) and emigrants (international migration) have higher consumption expenditure and improved dietary diversity than their non-migrating counterparts. We perform ordinary least square (OLS) and propensity score matching (PSM) to answer this question. The key findings reveal that out-migrant and emigrant households have higher overall consumption expenditure as well as higher expenditure on food. No direct impact of internal and international migration on the dietary diversity of the left behind households is observed. Finally comparing the impact of internal and international migration, we show that the impact of internal migration is larger than international migration for the left behind households.

Our second essay revolves around the remittance aspect of migration. How remittances play a crucial role in the development process of an individual, household and community especially if the economic status of the recipient household is poor. Remittance benefits the households left behind by diversifying risk, smoothing the consumption, preventing economic shocks, and helping in overcoming the liquidity constraints (Lucas and Stark, 1985; Rosenzweig and Stark, 1989; Stark and Bloom, 1985). On the other hand, some scholars observed remittances as a "cycle of dependency" which may lead to "stunted development" in the origin region (Papademetriou and Martin, 1991; Wiest, 1984). This may be true, if gained income is spent on only consumption rather than income generating activities and savings (Brown and Alhburg, 1999; Massey and Basem, 1992). In this essay, we intend to explore the remittance patterns from international migration and their impact on the consumption, savings and investment behaviour of the left-behind households in the context of Kerala. A key question in this context remains that whether remittances have led to the upward mobility with asset accumulation with implications for long

run or has largely led to higher and smoothed consumption without much focus on savings and investment. For the same we make use of Kerala Migration survey, 2011 conducted by Centre for Development Studies, Trivandrum. The findings from our study reveal that remittances do influence expenditure patterns and fuel asset accumulation. The left-behind households that receive remittances prefer to invest in fixed deposits, chit funds, bonds, shares and mutual funds, hence facilitating asset accumulation in the long run. Asset accumulation occurs in the form of financial assets. The occurrence is mainly influenced by the transitory nature of the remittances, which manipulates the investment decision.

Our third essay uses the phenomenon of migration to understand the variations in intra household bargaining power and its impact on decision making at the household level. This study has two key aspects to explore, first does migration affect the nature of intra household power allocation, how and to what extent; second, what are the implications of such power allocation on well-being, welfare of and resource allocation to household members. Thus, in this essay we make an attempt to understand the mechanism of how the absence of a spouse due to international migration affects the bargaining power of the spouse who is left behind on various household decisions especially pertaining to the expenditure on food and non-food items. The analysis has been performed using novel panel data from previous Kerala migration survey (2011, 2016). The results obtained through the combination of propensity score matching –difference -in- difference (PSM-DD) and fixed effect model reveal that international migration does affect the bargaining power of the left behind spouse for various decisions pertaining to expenditure decisions on food and non-food items in comparison to the non-migrant household where both husband and wife are present. The left behind spouse spends more on non-food items such as clothing and footwear, consumer durables,

rent and taxes, education and health of the family. There are many reasons for this behaviour of the left behind spouse ranging from asymmetric information and communication, the individual specific mental account which may differ based on the gender of the left behind spouse and the one who migrates, and the structure of the household (joint family and nuclear) which influences the bargaining position in turn the household spending decision.

Keywords: Internal migration, International migration, Household left behind, Consumption expenditure, Asset accumulation, Bargaining power, Gender, India.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ANNEXURES

ABBREVIATIONS

ATE- Average Treatment Effect

ATT- Average Treatment Effect on treated

CDS - Centre for Development Studies

DD – Difference -in-Difference

EMig - Emigrant

FDI - Foreign Direct Investment

GDP – Gross Domestic Product

HH - Household

ILO - International Labour Organization

IMR - International Migration Report

IV - Instrumental variables

LBHs - Left Behind Households

KMS - Kerala Migration Survey

MPCE - Monthly per capita consumption expenditure

MPCE food - Monthly per capita expenditure on food

NELM - New Economics of Labor Migration

NORKA -Non-Resident Keralite Affairs

NSDP - Net State Domestic Product

ODA - Official Development Assistance

OLS - Ordinary Least Squares

OMig - Out-migrant

PSM - Propensity Score Matching

SUR - Seemingly Unrelated Regression

3.6. Tables

Table 3.1: Descriptive Statistics of Sampled Households

International Migrant Households					
Variables	Observation	Mean	S.D	Min	Max
Panel A :(i) Characteristics of the Household Head					
Sex	395	0.68	0.46	0	1
Age	395	61	11.65	28	93
Education	395	9.09	5.2	1	23
Employment	395	4.04	1.18	1	5
Marital Status	395	3.74	3.04	1	9
(ii) Characteristics of the Household					
Household size	395	1.93	0.68	1	4
sector	395	0.76	0.42	1	2
Non-Migrant Households					
Variables	Observation	Mean	S.D	Min	Max
Panel B :(i) Characteristics of the Household Head					
Sex	15,033	0.76	0.42	0	1
Age	15,033	57	12.7	15	110
Education	15,033	9.21	5.59	0	23
Employment	15,033	3.56	1.16	1	5
Marital Status	15,033	3.64	2.9	1	9
(ii) Characteristics of the Household					
Household size	15,033	2.02	0.59	1	4
sector	15,033	0.77	0.41	1	2

Source: Author's calculation using panel data from KMS-2011-2016.

Table 3.2: Regression results for DD analysis (Basic Model)

Explanatory Variables	Logarithm food	Logarithm personal care	Logarithm rent and taxes	Logarithm medical	Logarithm clothing and footwear	Logarithm consumer durable	Logarithm tobacco and alcohol	Logarithm education	Logarithm entertainment and travel	Logarithm fuel and light
year1	0.312***	0.524***	-1.088***	0.197***	-0.453***	0.0191	-0.855***	0.122***	0.299***	0.221***
	(0.009)	(0.020)	(0.034)	(0.038)	(0.035)	(0.038)	(0.047)	(0.047)	(0.023)	(0.016)
mig_stats_16	0.101***	0.0811*	0.126*	0.11	-0.0343	-0.374***	-0.581***	0.324**	0.0825*	0.0229
	(0.02)	(0.042)	(0.072)	(0.109)	(0.086)	(0.103)	(0.142)	(0.137)	(0.0491)	(0.0264)
mig_stats_yr	**0.0600***	**0.159***	**0.724*****	**0.595*****	**1.002*****	**1.037*****	**0.366***	**0.219**	**-0.095**	**0.304*****
	(0.035)	(0.085)	(0.141)	(0.164)	(0.136)	(0.181)	(0.2)	(0.206)	(0.094)	(0.066)
Observations	15,428	15,428	15,428	15,428	15,428	15,428	15,428	15,428	15,428	15,428

Source: Author's calculation using panel data from KMS-2011-2016

Note: Figures in parentheses are standard errors; *** p<0.01, ** p<0.05, * p<0.1

Note: year1=year/time, mig_stats_16= treatment, mig_stats_yr= difference in difference estimate

Table 3.3: Regression results for DD analysis with covariates (Full Model)

Explanatory Variables	**Logarithm food**	**Logarithm personal care**	**Logarithm rent and taxes**	**Logarithm medical**	**Logarithm clothing and footwear**	**Logarithm consumer durable**	**Logarithm tobacco and alcohol**	**Logarithm education**	**Logarithm entertainment and travel**	**Logarithm fuel and light**
year1	0.333***	0.549***	-1.065***	0.144***	-0.387***	0.051	-0.843***	0.301***	0.314***	0.227***
	(0.008)	(0.021)	(0.034)	(0.038)	(0.035)	(0.038)	(0.048)	(0.041)	(0.022)	(0.015)
mig_stats_16	0.0241	0.0202	0.0605	0.022	-0.141*	-0.413***	-0.676***	0.184	-0.022	-0.027
	(0.019)	(0.043)	(0.074)	(0.106)	(0.084)	(0.104)	(0.142)	(0.127)	(0.049)	(0.027)
mig_stats_yr	**0.182*** **	**0.254*** **	**0.853*** **	**0.577*** **	**1.155*** **	**1.147*** **	**0.743*** **	**0.523*** **	**0.117**	**0.389*** **
	(0.034)	(0.085)	(0.144)	(0.162)	(0.135)	(0.181)	(0.199)	(0.194)	(0.096)	(0.065)
sex	-0.119***	-0.218***	-0.484***	-0.308***	-0.104	-0.252**	-0.525***	-0.640***	-0.240***	-0.203***
	(0.024)	(0.060)	(0.098)	(0.106)	(0.092)	(0.102)	(0.12)	(0.114)	(0.073)	(0.054)
age_hh	0.0057	0.013	-0.043	0.033	-0.0010	0.012	0.054	-0.056	0.0323	0.0331**
	(0.008)	(0.021)	(0.036)	(0.039)	(0.036)	(0.039)	(0.049)	(0.043)	(0.024)	(0.016)
marital_st_1	-0.0009	0.0052	0.035***	0.0098	0.0173	-0.002	0.031**	-0.006	-0.005	0.007
	(0.003)	(0.007)	(0.012)	(0.012)	(0.011)	(0.012)	(0.013)	(0.014)	(0.009)	(0.006)
edu_hh_1	0.009***	0.021***	0.028**	0.028**	-0.019*	0.069***	-0.039***	0.137***	0.032***	0.024***
	(0.003)	(0.006)	(0.011)	(0.012)	(0.011)	(0.012)	(0.015)	(0.014)	(0.007)	(0.005)
employ_1	-0.015***	-0.0008	-0.011	0.145***	-0.006	-0.0415*	-0.127***	-0.090***	-0.031**	-0.023**
	(0.005)	(0.011)	(0.019)	(0.020)	(0.019)	(0.021)	(0.025)	(0.022)	(0.013)	(0.009)
Number of males in particular age category										
count_Age_0_6_m	0.120***	0.161***	0.224***	0.281***	0.238***	0.107**	0.0614	0.286***	0.0697**	0.0891***
	(0.010)	(0.025)	(0.039)	(0.049)	(0.039)	(0.050)	(0.063)	(0.058)	(0.027)	(0.019)
count_Age_7_14_m	0.110***	0.123***	0.0295	0.087**	0.205***	0.135***	0.101**	1.205***	0.118***	0.0875***
	(0.008)	(0.021)	(0.035)	(0.039)	(0.034)	(0.041)	(0.050)	(0.037)	(0.021)	(0.014)
count_Age_15_24_m	0.133***	0.105***	0.083***	0.0579*	0.242***	0.091***	0.069*	0.858***	0.160***	0.077***
	(0.007)	(0.018)	(0.029)	(0.032)	(0.03)	(0.033)	(0.041)	(0.038)	(0.017)	(0.014)
count_Age_25_34_m	0.158***	0.138***	0.131***	0.054	0.207***	0.115***	0.444***	-0.195***	0.263***	0.083***
	(0.008)	(0.020)	(0.033)	(0.036)	(0.034)	(0.036)	(0.046)	(0.043)	(0.021)	(0.015)
count_Age_35_44_m	0.178***	0.166***	0.149***	0.056	0.244***	0.111**	0.689***	0.341***	0.327***	0.107***
	(0.011)	(0.027)	(0.047)	(0.049)	(0.045)	(0.051)	(0.064)	(0.055)	(0.029)	(0.023)
count_Age_45_59_m	0.179***	0.161***	0.196***	0.162***	0.172***	0.140**	0.643***	0.447***	0.248***	0.122***
	(0.013)	(0.032)	(0.055)	(0.059)	(0.053)	(0.060)	(0.074)	(0.064)	(0.034)	(0.027)
count_Age_60_max_m	0.132***	0.109**	0.089	0.407***	0.089	-0.013	0.251***	0.165**	0.128***	0.052
	(0.017)	(0.043)	(0.071)	(0.076)	(0.070)	(0.077)	(0.095)	(0.081)	(0.046)	(0.036)
Number of females in particular age category										
count_Age_0_6_f	0.099***	0.138***	0.0398	0.241***	0.135***	0.043	-0.021	0.152***	0.031	0.072***

Explanatory Variables	Logarithm food	Logarithm personal care	Logarithm rent and taxes	Logarithm medical	Logarithm clothing and footwear	Logarithm consumer durable	Logarithm tobacco and alcohol	Logarithm education	Logarithm entertainment and travel	Logarithm fuel and light
	(0.010)	(0.024)	(0.043)	(0.048)	(0.042)	(0.051)	(0.063)	(0.059)	(0.029)	(0.017)
count_Age_7_14_f	0.122***	0.149***	0.0562	0.069*	0.256***	0.092**	-0.023	1.138***	0.094***	0.076***
	(0.008)	(0.021)	(0.035)	(0.038)	(0.035)	(0.041)	(0.050)	(0.038)	(0.023)	(0.015)
count_Age_15_24_f	0.121***	0.151***	0.094***	0.039	0.334***	0.094***	-0.054	0.990***	0.129***	0.116***
	(0.007)	(0.017)	(0.029)	(0.034)	(0.030)	(0.035)	(0.041)	(0.038)	(0.019)	(0.013)
count_Age_25_34_f	0.114***	0.0462*	0.137***	0.041	0.282***	0.018	0.057	0.426***	0.090***	0.056***
	(0.009)	(0.026)	(0.041)	(0.045)	(0.040)	(0.046)	(0.057)	(0.054)	(0.027)	(0.019)
count_Age_35_44_f	0.144***	0.0819***	0.300***	0.190***	0.318***	0.074	0.073	0.525***	0.122***	0.123***
	(0.012)	(0.029)	(0.047)	(0.051)	(0.047)	(0.053)	(0.066)	(0.058)	(0.031)	(0.022)
count_Age_45_59_f	0.166***	0.125***	0.327***	0.387***	0.251***	0.081	0.110*	0.328***	0.190***	0.166***
	(0.011)	(0.028)	(0.047)	(0.05)	(0.046)	(0.050)	(0.062)	(0.056)	(0.031)	(0.022)
count_Age_60_max_f	0.139***	0.132***	0.274***	0.689***	0.107**	0.019	-0.013	0.469***	0.107***	0.153***
	(0.010)	(0.026)	(0.045)	(0.047)	(0.046)	(0.051)	(0.061)	(0.051)	(0.027)	(0.019)
sector	0.155***	0.194***	0.324***	0.076*	0.038	0.129***	-0.028	0.709***	0.239***	0.404***
	(0.009)	(0.023)	(0.039)	(0.042)	(0.040)	(0.045)	(0.054)	(0.046)	(0.025)	(0.017)
Observations	15,428	15,428	15,428	15,428	15,428	15,428	15,428	15,428	15,428	15,428

Source: Author's calculation using panel data from KMS-2011-2016

Note: Figures in parentheses are Standard error, *** p<0.01, ** p<0.05, * p<0.1

Note: year1=year/time, mig_stats_16= treatment, mig_stats_yr= difference in difference estimate

Table 3.4: Results of combined PSM-DD estimates

Explanatory Variables	Logarithm food	Logarithm personal car	Logarithm rent and taxes	Logarithm medical	Logarithm clothing and footwear	Logarithm consumer durable	Logarithm tobacco and alcohol	Logarithm education	Logarithm entertainment and travel	Logarithm fuel and light
year1	0.325***	0.547***	-1.001***	0.155***	-0.353***	0.0692*	-0.843***	0.300***	0.310***	0.226***
	(0.008)	(0.021)	(0.036)	(0.038)	(0.036)	(0.039)	(0.045)	(0.037)	(0.021)	(0.016)
mig_stats_16	-	-	-	-	-	-	-	-	-	-
mig_stats_yr	**0.153*** **	**0.203** **	**0.860*** **	**0.601*** **	**1.063*** **	**1.072*** **	**0.537*** **	**0.566*** **	**0.1**	**0.344*** **
	(0.034)	(0.088)	(0.151)	(0.161)	(0.151)	(0.165)	(0.192)	(0.155)	(0.090)	(0.068)
sex	-0.029	-0.179*	-0.331**	-0.544***	-0.0754	0.0115	-0.430**	-0.081	-0.0317	-0.00
	(0.038)	(0.098)	(0.169)	(0.18)	(0.169)	(0.184)	(0.215)	(0.173)	(0.101)	(0.076)
age_hh	0.012	-0.027	-0.196***	0.034	-0.199***	-0.140*	0.128	0.030	-0.016	0.031
	(0.015)	(0.038)	(0.066)	(0.07)	(0.066)	(0.072)	(0.084)	(0.068)	(0.039)	(0.030)
marital_st_1	-0.001	0.012	0.081***	0.038*	0.066***	0.006	0.018	-0.002	0.007	0.007
	(0.004)	(0.011)	(0.019)	(0.020)	(0.019)	(0.021)	(0.024)	(0.02)	(0.011)	(0.008)
edu_hh_1	-0.011*	-0.020	-0.031	0.044	-0.019	-0.007	0.053	0.007	-0.024	0.019
	(0.006)	(0.017)	(0.029)	(0.031)	(0.029)	(0.031)	(0.037)	(0.029)	(0.017)	(0.013)
employ_1	-0.003	0.047**	-0.003	0.131***	0.005	-0.021	-0.058	-0.050	-0.037*	-0.009
	(0.007)	(0.019)	(0.033)	(0.035)	(0.033)	(0.036)	(0.042)	(0.034)	(0.020)	(0.015)
Number of males in particular age category										
count_Age_0_6_m	0.0865***	0.117***	0.395***	0.174**	0.430***	0.102	0.250***	0.318***	0.037	0.072**
	(0.016)	(0.043)	(0.073)	(0.078)	(0.073)	(0.080)	(0.093)	(0.075)	(0.044)	(0.033)
count_Age_7_14_m	0.081***	0.101**	0.267***	0.135*	0.292***	0.126*	0.142	1.034***	0.114***	0.063**
	(0.016)	(0.040)	(0.069)	(0.074)	(0.069)	(0.076)	(0.088)	(0.071)	(0.041)	(0.031)
count_Age_15_24_m	0.091***	0.075**	0.277***	0.051	0.219***	0.056	0.074	0.827***	0.202***	0.0516*
	(0.015)	(0.038)	(0.065)	(0.07)	(0.065)	(0.071)	(0.083)	(0.067)	(0.03)	(0.029)
count_Age_25_34_m	0.154***	0.096**	0.142**	0.059	0.172**	0.026	0.139	0.189***	0.255***	0.0637**
	(0.015)	(0.039)	(0.068)	(0.073)	(0.068)	(0.074)	(0.086)	(0.070)	(0.040)	(0.031)
count_Age_35_44_m	0.144***	0.078	0.076	0.007	0.1	-0.045	0.364***	0.483***	0.238***	0.0368
	(0.018)	(0.04)	(0.082)	(0.087)	(0.082)	(0.089)	(0.104)	(0.08)	(0.049)	(0.037)
count_Age_45_59_m	0.147***	0.077	0.16	0.128	0.124	0.14	0.421***	0.342***	0.192***	0.078*

Explanatory Variables	Logarithm food	Logarithm personal car	Logarithm rent and taxes	Logarithm medical	Logarithm clothing and footwear	Logarithm consumer durable	Logarithm tobacco and alcohol	Logarithm education	Logarithm entertainment and travel	Logarithm fuel and light
	(0.022)	(0.058)	(0.099)	(0.106)	(0.099)	(0.109)	(0.127)	(0.102)	(0.059)	(0.045)
count_Age_60_max_m	0.128***	0.0777	0.0147	0.252*	0.223*	-0.006	0.108	-0.027	0.258***	0.012
	(0.030)	(0.078)	(0.134)	(0.143)	(0.134)	(0.147)	(0.171)	(0.138)	(0.080)	(0.060)
Number of females in particular age category										
count_Age_0_6_f	0.078***	0.087**	0.128*	0.160**	0.156**	0.0362	0.049	0.184**	0.012	0.034
	(0.016)	(0.041)	(0.070)	(0.075)	(0.071)	(0.077)	(0.090)	(0.073)	(0.042)	(0.032)
count_Age_7_14_f	0.082***	0.08**	0.107	-0.016	0.213***	0.014	0.023	0.783***	0.072*	0.054*
	(0.015)	(0.038)	(0.066)	(0.070)	(0.066)	(0.072)	(0.084)	(0.068)	(0.039)	(0.03)
count_Age_15_24_f	0.08***	0.122***	0.046	0.090	0.277***	0.00137	0.005	0.791***	0.099***	0.101***
	(0.012)	(0.031)	(0.054)	(0.058)	(0.054)	(0.059)	(0.069)	(0.056)	(0.033)	(0.024)
count_Age_25_34_f	0.103***	0.069*	0.0484	0.065	0.255***	0.013	-0.030	0.596***	0.123***	0.110***
	(0.01)	(0.038)	(0.065)	(0.070)	(0.066)	(0.071)	(0.083)	(0.067)	(0.039)	(0.029)
count_Age_35_44_f	0.120***	0.126***	0.142*	0.145*	0.229***	0.090	-0.076	0.592***	0.107**	0.149***
	(0.018)	(0.047)	(0.080)	(0.086)	(0.081)	(0.088)	(0.103)	(0.083)	(0.048)	(0.036)
count_Age_45_59_f	0.127***	0.126**	0.181**	0.365***	0.187**	-0.0198	-0.030	0.199**	0.169***	0.185***
	(0.02)	(0.051)	(0.087)	(0.094)	(0.087)	(9.57E-02)	(0.112)	(0.090)	(0.052)	(0.039)
count_Age_60_max_f	0.101***	0.138**	0.104	0.560***	0.183**	-9.73E-05	-0.034	0.315***	0.078	0.115***
	(0.021)	(0.053)	(0.092)	(0.098)	(0.092)	(0.101)	(0.117)	(0.094)	(0.055)	(0.041)
sector	-0.066	-0.106	0.797***	0.012	0.228	-0.086	-0.044	-0.123	0.145	-0.065
	(0.051)	(0.130)	(0.222)	(0.237)	(0.222)	(0.242)	(0.283)	(0.228)	(0.133)	(0.101)
Observations	15,378	15,378	15,378	15,378	15,378	15,378	15,378	15,378	15,378	15,378

Source: Author's calculation using panel data from KMS-2011-2016

Note: Figures in parentheses are Standard error, *** p<0.01, ** p<0.05, * p<0.1

Note: year1=year/time, mig_stats_16= treatment, mig_stats_yr= difference in difference estimate

Table 3.5: Results of Household Fixed Effect estimates (Basic model)

Explanatory Variables	Logarithm food	Logarithm personal care	Logarithm rent and taxes	Logarithm medical	Logarithm clothing and footwear	Logarithm consumer durable	Logarithm tobacco and alcohol	Logarithm education	Logarithm entertainment and travel	Logarithm fuel and light
year1	0.312***	0.524***	-1.088***	0.197***	-0.453***	0.0191	-0.855***	0.122***	0.299***	0.221***
	(0.008)	(0.019)	(0.033)	(0.035)	(0.033)	(0.035)	(0.041)	(0.035)	(0.019)	(0.015)
o.mig_stats_16	-	-	-	-	-	-	-	-	-	-
mig_stats_yr	**0.0600***	**0.159***	**0.724*****	**0.595*****	**1.002*****	**1.037*****	**0.366****	**0.219**	**-0.095**	**0.304*****
	(0.034)	(0.084)	(0.144)	(0.154)	(0.145)	(0.156)	(0.183)	(0.155)	(0.086)	(0.065)
Observations	15,428	15,428	15,428	15,428	15,428	15,428	15,428	15,428	15,428	15,428

Source: Author's calculation using panel data from KMS-2011-2016

Note: Figures in parentheses are Standard error, *** p<0.01, ** p<0.05, * p<0.1

Note: year1=year/time, mig_stats_16= treatment, mig_stats_yr= difference in difference estimate

Table 3.6: Results of Household Fixed Effect estimates with covariates (Full Model)

Explanatory Variables	**Logarithm food**	**Logarithm personal care**	**Logarithm rent and taxes**	**Logarithm medical**	**Logarithm clothing and footwear**	**Logarithm consumer durable**	**Logarithm tobacco and alcohol**	**Logarithm education**	**Logarithm entertainment and travel**	**Logarithm fuel and light**
year1	0.324***	0.547***	-1.001***	0.156***	-0.356***	0.0668*	-0.843***	0.299***	0.308***	0.225***
	(0.008)	(0.021)	(0.036)	(0.038)	(0.03)	(0.039)	(0.045)	(0.037)	(0.021)	(0.016)
o.mig_stats_16	-	-	-	-	-	-	-	-	-	-
mig_stats_yr	**0.154*** **	**0.204** **	**0.859*** **	**0.602*** **	**1.067*** **	**1.076*** **	**0.529*** **	**0.571*** **	**0.104**	**0.345*** **
	(0.034)	(0.088)	(0.151)	(0.161)	(0.151)	(0.165)	(0.192)	(0.155)	(0.090)	(0.068)
sex	-0.036	-0.187*	-0.329*	-0.552***	-0.105	-0.016	-0.413*	-0.092	-0.074	-0.004
	(0.038)	(0.098)	(0.168)	(0.179)	(0.168)	(0.183)	(0.214)	(0.173)	(0.101)	(0.076)
age_hh	0.011	-0.030	-0.198***	0.029	-0.210***	-0.148**	0.128	0.030	-0.023	0.032
	(0.015)	(0.038)	(0.066)	(0.070)	(0.066)	(0.072)	(0.084)	(0.068)	(0.039)	(0.030)
marital_st_1	-0.0003	0.013	0.081***	0.039*	0.071***	0.011	0.016	-0.001	0.014	0.006
	(0.004)	(0.011)	(0.019)	(0.020)	(0.019)	(0.021)	(0.024)	(0.019)	(0.011)	(0.008)
edu_hh_1	-0.012*	-0.022	-0.031	0.047	-0.017	-0.004	0.055	-0.001	-0.028*	0.021
	(0.006)	(0.016)	(0.029)	(0.030)	(0.029)	(0.031)	(0.036)	(0.029)	(0.017)	(0.013)
employ_1	-0.003	0.048**	-0.002	0.137***	0.011	-0.018	-0.057	-0.051	-0.037*	-0.008
	(0.007)	(0.019)	(0.033)	(0.035)	(0.033)	(0.03)	(0.042)	(0.034)	(0.020)	(0.015)
Number of males in particular age category										
count_Age_0_6_m	0.086***	0.117***	0.402***	0.178**	0.434***	0.103	0.244***	0.325***	0.0407	0.0731**
	(0.016)	(0.043)	(0.073)	(0.078)	(0.073)	(0.080)	(0.093)	(0.075)	(0.044)	(0.033)
count_Age_7_14_m	0.081***	0.103**	0.267***	0.134*	0.291***	0.121	0.142	1.032***	0.114***	0.0631**
	(0.016)	(0.040)	(0.069)	(0.074)	(0.069)	(0.075)	(0.088)	(0.071)	(0.041)	(0.031)
count_Age_15_24_m	0.090***	0.074*	0.276***	0.052	0.216***	0.054	0.072	0.826***	0.199***	0.051*
	(0.015)	(0.038)	(0.065)	(0.07)	(0.065)	(0.071)	(0.083)	(0.067)	(0.039)	(0.029)
count_Age_25_34_m	0.153***	0.095**	0.145**	0.066	0.173**	0.026	0.133	0.192***	0.251***	0.064**
	(0.015)	(0.039)	(0.068)	(0.072)	(0.068)	(.0744)	(0.086)	(0.070)	(0.040)	(0.031)
count_Age_35_44_m	0.145***	0.077	0.077	0.015	0.106	-0.038	0.351***	0.490***	0.239***	0.037
	(0.018)	(0.047)	(0.081)	(0.087)	(0.082)	(0.089)	(0.104)	(0.084)	(0.049)	(0.037)
count_Age_45_59_m	0.149***	0.077	0.162	0.136	0.137	0.151	0.406***	0.350***	0.202***	0.078*
	(0.022)	(0.057)	(0.099)	(0.106)	(0.099)	(0.108)	(0.126)	(0.102)	(0.059)	(0.045)
count_Age_60_max_m	0.128***	0.074	0.023	0.269*	0.240*	0.004	0.101	-0.023	0.261***	0.012
	(0.030)	(0.078)	(0.134)	(0.143)	(0.134)	(0.146)	(0.171)	(0.138)	(0.080)	(0.060)

Explanatory Variables	Logarithm food	Logarithm personal care	Logarithm rent and taxes	Logarithm medical	Logarithm clothing and footwear	Logarithm consumer durable	Logarithm tobacco and alcohol	Logarithm education	Logarithm entertainment and travel	Logarithm fuel and light
Number of females in particular age category										
count_Age_0_6_f	0.079***	0.088**	0.125*	0.160**	0.153**	0.036	0.051	0.181**	0.013	0.032
	(0.016)	-(0.041)	(0.070)	(0.075)	(0.071)	(0.077)	(0.090)	(0.072)	(0.042)	(0.032)
count_Age_7_14_f	0.083***	0.0837**	0.105	-0.013	0.212***	0.016	0.023	0.781***	0.077*	0.050*
	(0.015)	(0.038)	(0.065)	(0.070)	(0.066)	(0.071)	(0.083)	(0.067)	(0.039)	(0.029)
count_Age_15_24_f	0.082***	0.119***	0.042	0.085	0.271***	-0.001	0.006	0.790***	0.095***	0.102***
	(0.013)	(0.032)	(0.054)	(0.058)	(0.054)	(0.059)	(0.069)	(0.055)	(0.032)	(0.024)
count_Age_25_34_f	0.101***	0.0676*	0.05	0.063	0.254***	0.009	-0.029	0.599***	0.121***	0.111***
	(0.015)	(0.038)	(0.066)	(0.070)	(0.066)	(0.072)	(0.084)	(0.068)	(0.039)	(0.029)
count_Age_35_44_f	0.118***	0.127***	0.144*	0.145*	0.229***	0.086	-0.074	0.594***	0.102**	0.151***
	(0.019)	(0.047)	(0.080)	(0.086)	(0.081)	(0.088)	(0.103)	(0.083)	(0.048)	(0.036)
count_Age_45_59_f	0.126***	0.126**	0.182**	0.360***	0.186**	-0.021	-0.026	0.201**	0.172***	0.187***
	(0.020)	(0.051)	(0.087)	(0.093)	(0.087)	(0.095)	(0.111)	(0.090)	(0.052)	(0.039)
count_Age_60_max_f	0.101***	0.139***	0.104	0.550***	0.180*	-0.001	-0.029	0.313***	0.085	0.115***
	(0.021)	(0.054)	(0.092)	(0.098)	(0.092)	(0.1)	(0.117)	(0.094)	(0.055)	(0.041)
sector	-0.0668	-0.106	0.797***	0.012	0.229	-0.085	-0.045	-0.123	0.143	-0.065
	(0.051)	(0.13)	(0.222)	(0.237)	(0.222)	(0.242)	(0.283)	(0.228)	(0.133)	(0.101)
Observations	15,428	15,428	15,428	15,428	15,428	15,428	15,428	15,428	15,428	15,428

Source: Author's calculation using panel data from KMS-2011-2016

Note: Figures in parentheses are Standard error, *** p<0.01, ** p<0.05, * p<0.1

Note: year1=year/time, mig_stats_16= treatment, mig_stats_yr= difference in difference estimate

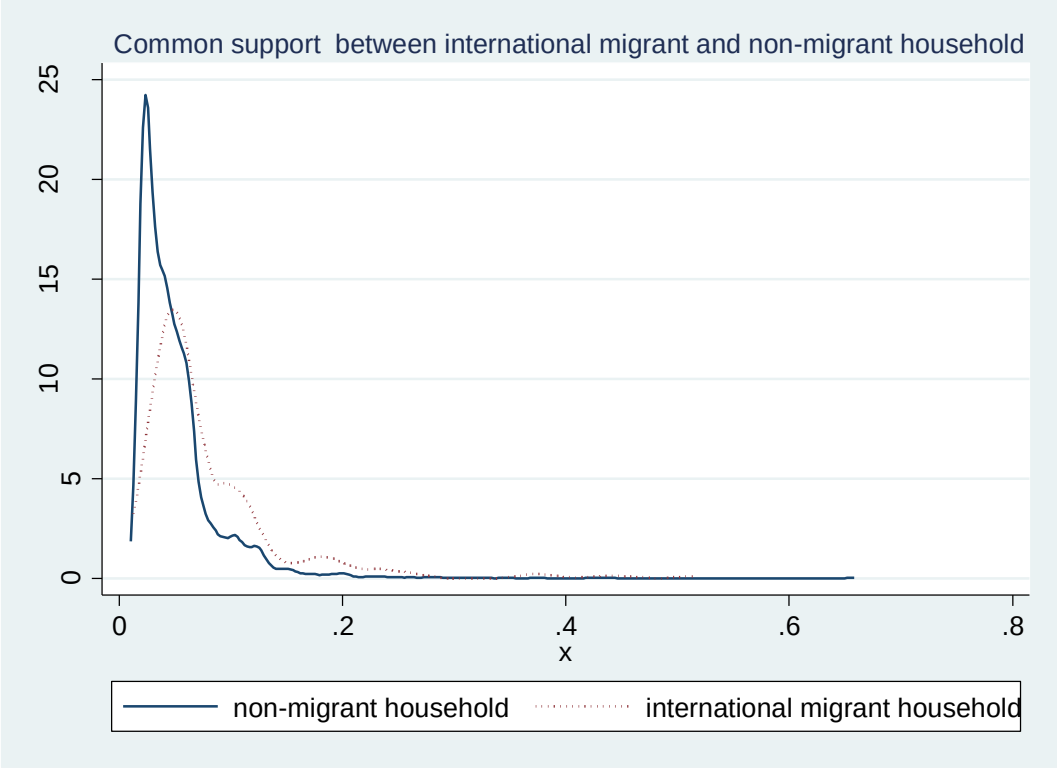
Table 3.7: Full Combined Results

	Col (1)	Col (2)	Col (3)	Col (4)	Col (5)
Explanatory Variables	**OLS Basic Model**	**OLS Full Model**	**PSM with DID**	**Fixed Effects Basic Model**	**Fixed Effects Full Model**
Logarithm food	0.0600*	0.182***	0.153***	0.0600*	0.154***
	(0.035)	(0.034)	(0.035)	(0.034)	(0.035)
Logarithm personal care	0.159*	0.254***	0.203**	0.159*	0.204**
	(0.085)	(0.085)	(0.088)	(0.084)	(0.088)
Logarithm rent and taxes	0.724***	0.853***	0.860***	0.724***	0.859***
	(0.141)	(0.144)	(0.151)	(0.144)	(0.151)
Logarithm medical	0.595***	0.577***	0.601***	0.595***	0.602***
	(0.164)	(0.162)	(0.161)	(0.154)	(0.161)
Logarithm clothing and footwear	1.002***	1.155***	1.063***	1.002***	1.067***
	(0.136)	(0.135)	(0.151)	(0.145)	(0.151)
Logarithm consumer durable	1.037***	1.147***	1.072***	1.037***	1.076***
	(0.181)	(0.181)	(0.165)	(0.156)	(0.165)
Logarithm tobacco and alcohol	0.366*	0.743***	0.537***	0.366**	0.529***
	(0.200)	(0.199)	(0.192)	(0.183)	(0.192)
Logarithm education	0.219	0.523***	0.566***	0.219	0.571***
	(0.206)	(0.194)	(0.155)	(0.155)	(0.155)
Logarithm entertainment and travel	-0.095	0.117	0.100	-0.095	0.104
	(0.094)	(0.099)	(0.090)	(0.086)	(0.090)
Logarithm fuel and light	0.304***	0.389***	0.344***	0.304***	0.345***
	(0.066)	(0.066)	(0.068)	(0.065)	(0.068)
No. of Observations	15,428	15,428	15,378	15,428	15,428

Source: Author's calculation using panel data from KMS-2011-2016

Note: Figures in parentheses are Standard error, *** p<0.01, ** p<0.05, * p<0.1

3.7. Figures


Common support between international migrant and non-migrant household
0
5
10
15
20
25
0
.2
.4
.6
.8
x
non-migrant household
international migrant household

3.8. Annexure

Table 3A.1: Intrahousehold allocation on food and non-food items by international and non-migrant households

Food and non-food items		**migrant household**	**non-migrant Household**
food	mean	4906.82	3587.41
	median	4000	3000
Personal Care	mean	436.45	256.16
	median	300	175
Rent and Taxes	mean	264.74	165.04
	median	166.67	100
Medical	mean	1192.35	569.13
	median	416.67	166.67
Cloth and Footwear	mean	560.73	307.43
	median	333.33	191.67
Consumer Durables	mean	279.38	89.16
	median	0	0
Tobacco and Alcohol	mean	207.79	229.16
	median	0	0
Education	mean	1963.76	699.15
	median	260	200
Entertainment and Travel	mean	1113.53	900.59
	median	700	640
Fuel and Light	mean	926.28	431.02
	median	550	345

Source: Author's calculation using panel data from KMS-2011-2016

Table 3A.2: Expenditures incurred by Households based on the sex of the Household Head

		Sex of HH head = Male		Sex of HH head= Female	
Variables		**migrant household**	**non-migrant Household**	**migrant household**	**non-migrant Household**
food	mean	4985.57	3679.78	4736.72	3281.43
	median	4500	3112	4000	2861
Personal Care	mean	419.69	264.58	472.64	228.26
	median	300	190	250	150
Rent and Taxes	mean	287.75	171.77	215.05	142.77
	median	166.67	108.33	150	83.33
Medical	mean	1206.19	574.76	1162.47	550.47
	median	416.67	166.67	250	166.67
Cloth and Footwear	mean	550.89	312.13	581.99	291.86
	median	333.33	208.3333	333.33	166.67
Consumer Durables	mean	304.85	95.56	224.37	67.95
	median	0	0	0	0
Tobacco and Alcohol	mean	255.26	246.01	105.28	173.87
	median	0	0	0	0
Education	mean	1984.39	750.38	1919.196	529.5684
	median	245	215.33	333.3333	150
Entertainment and Travel	mean	1078.11	931.38	1190.06	798.61
	median	700	650	700	500
Fuel and Light	mean	676.09	441.97	1466.7	394.77
	median	550	355	541.67	316.04

Source: Author's calculation using panel data from KMS-2011-2016

Table 3A.3: Probit regression to estimate the propensity score

mig_stats_16	Coefficient	Std. error	z	P>z	[95% Conf.	Interval]
sex	0.1485085	0.1486719	1	0.318	-0.142883	0.4399
age_hh	0.0308592	0.0515794	0.6	0.55	-0.0702346	0.1319529
sector	0.0177511	0.0595827	0.3	0.766	-0.0990289	0.1345311
edu_hh_1	-0.0147935	0.0158217	-0.94	0.35	-0.0458034	0.0162164
employ_1	0.0096269	0.0286003	0.34	0.736	-0.0464286	0.0656823
marital_st_1	-0.0315505	0.0187753	-1.68	0.093	-0.0683494	0.0052484
Number of males in particular age category						
count_Ag~6_m	-0.039432	0.0605095	-0.65	0.515	-0.1580284	0.0791645
count_A~14_m	-0.0068807	0.0535253	-0.13	0.898	-0.1117884	0.098027
count_A~24_m	0.3955369	0.0368093	10.75	0	0.3233921	0.4676817
count_A~34_m	0.2659825	0.0430942	6.17	0	0.1815195	0.3504455
count_A~44_m	0.0593091	0.0678926	0.87	0.382	-0.0737581	0.1923762
count_Ag~9_m	0.0025194	0.0814351	0.03	0.975	-0.1570904	0.1621293
count_Ag~x_m	0.1058946	0.1036237	1.02	0.307	-0.0972042	0.3089934
Number of females in particular age category						
count_Ag~6_f	0.0267489	0.060794	0.44	0.66	-0.0924046	0.145903
count_A~14_f	-0.0459628	0.055677	-0.83	0.409	-0.1550877	0.063162
count_A~24_f	0.023702	0.043006	0.55	0.582	-0.0605877	0.107992
count_A~34_f	-0.0027487	0.059874	-0.05	0.963	-0.1200997	0.114602
count_A~44_f	-0.0034163	0.072144	-0.05	0.962	-0.1448154	0.137983
count_Ag~9_f	0.0743031	0.069574	1.07	0.286	-0.0620591	0.210665
count_Ag~x_f	0.1052471	0.065543	1.61	0.108	-0.0232147	0.233709
constant	-2.217119	0.19383	-11.44	0	-2.597018	-1.83722
LR chi2(20)	169.3					
Log likelihood	-1473.9652					
Pseudo R2	0.0543					
Observations	7714					

Source: Author's calculation using panel data from KMS-2011-2016.

References

Acosta, P. (2006). *Labor supply, school attendance, and remittances from international migration: the case of El Salvador*. The World Bank.

Adams Jr, R. H. (1991). The economic uses and impact of international remittances in rural Egypt. *Economic Development and Cultural Change*, *39*(4), 695-722.

Adams Jr, R. H. (1998). Remittances, investment, and rural asset accumulation in Pakistan. *Economic Development and Cultural Change*, *47*(1), 155-173.

Adams, R. H. J. (2004). *Remittances and poverty in Guatemala*. The World Bank.

Adams, R. H. J. (2006). *Remittances and poverty in Ghana*. The World Bank.

Adams, R. H. J., & Cuecuecha, A. (2010). *The economic impact of international remittances on poverty and household consumption and investment in Indonesia*. The World Bank.

Adam, C., Hoddinott, J., & Ligon, E. A. (2011). Dynamic intrahousehold bargaining, matrimonial property law and suicide in Canada.

Adepoju, A. (1998). Linkages between internal and international migration: the African situation. *International Social Science Journal*, *50*(157), 387-395.

Ahmed, J., Mughal, M., & Klasen, S. (2018). Great expectations? Remittances and asset accumulation in Pakistan. *Journal of International Development*, *30*(3), 507-532.

Anderson, S. (2003). Why dowry payments declined with modernization in Europe but are rising in India. *Journal of Political Economy*, *111*(2), 269-310.

Andersson, L. (2014). *Migration, remittances and household welfare in Ethiopia* (No. 004). United Nations University-Maastricht Economic and Social Research Institute on Innovation and Technology (MERIT).

Angrist, J. D., & Pischke, J. S. (2008). *Mostly harmless econometrics: An empiricist's companion*. Princeton university press.

Antman, F. M. (2014). Spousal employment and intra-household bargaining power. *Applied economics letters*, *21*(8), 560-563.

Antman, F. M. (2015). Gender discrimination in the allocation of migrant household resources. *Journal of population economics*, *28*(3), 565-592.

Ashenfelter, O., & Card, D. (1984). *Using the longitudinal structure of earnings to estimate the effect of training programs* (No. w1489). National Bureau of Economic Research.

Ashraf, N. (2009). Spousal control and intra-household decision making: An experimental study in the Philippines. *American Economic Review*, *99*(4), 1245-77.

Atkin, D. (2013). Trade, tastes, and nutrition in India. *American economic review*, *103*(5), 1629-63.

Azzarri, C., & Zezza, A. (2011). International migration and nutritional outcomes in Tajikistan. *Food Policy*, 36(1), 54-70.

Beegle, K., De Weerdt, J., & Dercon, S. (2011). Migration and economic mobility in Tanzania: Evidence from a tracking survey. *Review of Economics and Statistics*, *93*(3), 1010-1033.

Bomuhangi, A., Doss, C., & Meinzen-Dick, R. (2011). Who owns the land?: perspectives from rural Ugandans and implications for land acquisitions. *IFPRI-Discussion Papers*, (1136).

Boserup, E. (1970). Woman's role in economic development. London: Allen & Unwin.

Brown, R. P., & Ahlburg, D. A. (1999). Remittances in the south pacific. *International Journal of Social Economics*, *26*(1/2/3), 325-344.

Brown, R. P. (1994). Migrants' remittances, savings and investment in the South Pacific. *Int'l Lab. Rev.*, *133*, 347.

Chami, Ralph; Connel Fullenkamp; and Samir Jahjah (2003). Are Immigrant Remittance Flows a Source of Capital for Development? Washington, DC: International Monetary Fund (IMF), IMF Working Paper, WP/03/189 (September); available at: http://www.imf.org/external/pubs/ft/wp/2003/wp03189.pdf.

Chandavarkar, A. G. (1980). Use of migrants' remittances in labor-exporting countries. *Finance and development*, *17*(2), 36.

Chandrasekhar, S., Das, M., & Sharma, A. (2015). Short-term migration and consumption expenditure of households in rural India. *Oxford Development Studies*, *43*(1), 105-122.

Chen, J. J. (2006). Migration and imperfect monitoring: implications for intra-household allocation. *American Economic Review*, *96*(2), 227-231.

Chiodi, V., Jaimovich, E., & Montes-Rojas, G. (2012). Migration, remittances and capital accumulation: Evidence from rural Mexico. *Journal of Development Studies*, *48*(8), 1139-1155.

Chowdhury, M., & Radicic, D. (2019). Remittances and Asset Accumulation in Bangladesh: A Study Using Generalised Propensity Score. *Journal of International Development*.

Clemens, M. A., & Tiongson, E. R. (2017). Split decisions: household finance when a policy discontinuity allocates overseas work. *Review of Economics and Statistics*, *99*(3), 531-543.

Damon, A. L. (2010). Agricultural land use and asset accumulation in migrant households: The case of El Salvador. *The Journal of Development Studies*, *46*(1), 162-189.

Das, M. (2014). Measures, spatial profile and determinants of dietary diversity: Evidence from India. *Spatial Profile and Determinants of Dietary Diversity: Evidence from India (July 5, 2014)*.

Datta, P. R., Akwensivie, G., & Akwensivie, D. M. (2006). Bridging the Housing Gap in Less Developed Countries. *Journal of Business and Retail Management Research (JBRMR) Vol*, *1*.

Deere, C. D., & Alvarado, G. (2016). Asset accumulation through international migration: gender, remittances, and decision making in Ecuador. *Latin American Research Review*, 249-270.

De, P. K., & Ratha, D. (2012). Impact of remittances on household income, asset and human capital: Evidence from Sri Lanka. *Migration and Development*, *1*(1), 163-179.

de Haas, H. (2010). Migration and development: A theoretical perspective 1. *International migration review*, 44(1), 227-264.

Dehejia, R. H., & Wahba, S. (2002). Propensity score-matching methods for nonexperimental causal studies. *Review of Economics and statistics*, *84*(1), 151-161.

Dehejia, R. (2005). Practical propensity score matching: a reply to Smith and Todd. *Journal of econometrics*, *125*(1-2), 355-364.

Deininger, K., Goyal, A., & Nagarajan, H. (2013). Women's inheritance rights and intergenerational transmission of resources in India. *Journal of Human Resources*, *48*(1), 114-141.

Démurger, S. (2015). Migration and families left behind. *IZA World of Labor*.

Desai, S., & Banerji, M. (2008). Negotiated identities: Male migration and left-behind wives in India. *Journal of Population Research*, *25*(3), 337-355.

Dorn, S. (2012, September). pscore2: Stata module to enforce balancing score property in each covariate dimension. In *United Kingdom Stata Users' Group Meetings 2012* (No. 11). Stata Users Group.

Doss, C. (2006). The effects of intrahousehold property ownership on expenditure patterns in Ghana. *Journal of African economies*, *15*(1), 149-180.

Doss, C. (2013). Intrahousehold bargaining and resource allocation in developing countries. *The World Bank Research Observer*, *28*(1), 52-78.

Duflo, E., & Udry, C. (2004). *Intrahousehold resource allocation in Cote d'Ivoire: Social norms, separate accounts and consumption choices* (No. w10498). National Bureau of Economic Research.

Edwards, A. C., & Ureta, M. (2003). International migration, remittances, and schooling: evidence from El Salvador. *Journal of development economics*, *72*(2), 429-461.

Friedman, M. (1957). The permanent income hypothesis. In *A theory of the consumption function* (pp. 20-37). Princeton University Press.

Friedberg, R. M. (2000). You can't take it with you? Immigrant assimilation and the portability of human capital. *Journal of labor economics*, *18*(2), 221-251.

García, L. (2017). The consumption of household goods, bargaining power and their relationship with a conditional cash transfer program in Peru. *Journal of International Development*, *29*(4), 500-519.

Gibson, J., McKenzie, D., & Stillman, S. (2011). What happens to diet and child health when migration splits households? Evidence from a migration lottery program. *Food Policy*, *36*(1), 7-15.

Gibson, J., McKenzie, D., & Rohorua, H. (2014). Development Impacts of Seasonal and Temporary Migration: A Review of Evidence from the P acific and S outheast A sia. *Asia & the Pacific Policy Studies*, *1*(1), 18-32.

Gilani, I., Khan, M. F., & Iqbal, M. (1981). Labour migration from Pakistan to the Middle East and its impact on the domestic economy: part III (sample design & field-work).

Giuliano, P., & Ruiz-Arranz, M. (2009). Remittances, financial development, and growth. *Journal of Development Economics*, *90*(1), 144-152.

Göbel, K. (2013). Remittances, expenditure patterns, and gender: parametric and semiparametric evidence from Ecuador. *IZA Journal of Migration*, *2*(1), 1.

Gulati, L. (1983). Male migration to Middle East and the impact on the family: Some evidence from Kerala. *Economic and Political Weekly*, 2217-2226.

Guyer, J. (1997). Endowments and assets: The anthropology of wealth and the economics of intrahousehold allocation. *Intrahousehold resource allocation in developing countries: Methods, models, and policy*.

Hagen-Zanker, J. (2008). Why do people migrate? A review of the theoretical literature. *A Review of the Theoretical Literature (January 2008). Maastrcht Graduate School of Governance Working Paper No. MGSOG/2008/WP002.*

Hagen-Zanker, J., & Azzarri, C. (2010). Are internal migrants in Albania leaving for the better? *Eastern European Economics*, 48(6), 57-84.

Hagen-Zanker, J., & Siegel, M. (2007). The determinants of remittances: A review of the literature.

Harilal, K. N., & Joseph, K. J. (2003). Stagnation and revival of Kerala economy: An open economy perspective. *Economic and Political Weekly*, 2286-2294.

Heckman, J. J., & Smith, J. A. (1999). The pre-programme earnings dip and the determinants of participation in a social programme. Implications for simple programme evaluation strategies. *The Economic Journal*, *109*(457), 313-348.

Hildebrandt, N., & McKenzie, D. J. (2005). *The effects of migration on child health in Mexico*. The World Bank.

Hoddinott, J., & Haddad, L. (1995). Does female income share influence household expenditures? Evidence from Côte d'Ivoire. *oxford Bulletin of Economics and Statistics*, *57*(1), 77-96.

Hondagneu-Sotelo, P. (1992). Overcoming patriarchal constraints: The reconstruction of gender relations among Mexican immigrant women and men. *Gender & Society*, *6*(3), 393-415.

Jolly, S., Bell, E., & Narayanaswamy, L. (2003). *Gender and migration in Asia: overview and annotated bibliography*. BRIDGE.

Kabeer, N. (1999). From feminist insights to an analytical framework: An institutional perspective on gender inequality. In N. Kabeer & R. Subrahmaniam (Eds.), Institutions, relations and outcomes: A framework and case studies for gender aware planning. New Delhi: Kali for Women.

Kanaiaupuni, S.M. (2000). Reframing the migration question: an analysis of men, women, and gender in Mexico. Social Forces, Vol. 78, No. 4, pp. 1311–1347.

Kannan, K.P., & Hari, K.S. (2002). Kerala's gulf connection: Emigration, remittances and their macroeconomic impact 1972–2000. *Working Paper No. 328*. Centre for Development Studies, Thiruvananthapuram.

Kapur, D. (2005). Remittances: the new development mantra?. *Remittances: Development impact and future prospects*, 331-60.

Karamba, W. R., Quiñones, E. J., & Winters, P. (2011). Migration and food consumption patterns in Ghana. *Food Policy*, 36(1), 41-53.

Kerala Migration Survey (2011). Thiruvananthapuram: Centre for Development Studies, 2011. URL: http://cds.edu/research/ru/union-ministry-of-overseas-indian-affairs-research-unit-on-international-migration/kerala-migration-survey-data/.

Kerala Migration Survey (2016). Thiruvananthapuram: Centre for Development Studies, 2011. URL: http://cds.edu/research/ru/union-ministry-of-overseas-indian-affairs-research-unit-on-international-migration/kerala-migration-survey-data/.

Khandker, S., B. Koolwal, G., & Samad, H. (2009). *Handbook on impact evaluation: quantitative methods and practices*. The World Bank.

Kurian, R. (1979). Patterns of emigration from Kerala. *Social Scientist*, 32-53.

Lancaster, G., Maitra, P., & Ray, R. (2006). Endogenous intra-household balance of power and its impact on expenditure patterns: evidence from India. *Economica*, *73*(291), 435-460.

Lefebvre, A. (2014). *Kinship, honour and money in rural Pakistan: subsistence economy and the effects of international migration*. Routledge.

Li, L., & Wu, X. (2011). Gender of children, bargaining power, and intrahousehold resource allocation in China. *Journal of Human Resources*, *46*(2), 295-316.

Lipton, M. (1980). Migration from rural areas of poor countries: the impact on rural productivity and income distribution. *World development*, *8*(1), 1-24.

Lucas, R. E., & Stark, O. (1985). Motivations to remit: Evidence from Botswana. *Journal of political Economy*, *93*(5), 901-918.

Lundberg, S. J., Pollak, R. A., & Wales, T. J. (1997). Do husbands and wives pool their resources? Evidence from the United Kingdom child benefit. *Journal of Human resources*, 463-480.

Massey, D. S., & Parrado, E. A. (1998). International migration and business formation in Mexico. *Social Science Quarterly*, 1-20.

McKenzie, D., Stillman, S., & Gibson, J. (2010). How important is selection? Experimental vs. non-experimental measures of the income gains from migration. *Journal of the European Economic Association*, *8*(4), 913-945.

Modigliani, F., & Ando, A. K. (1957). Tests of the life cycle hypothesis of savings: Comments and suggestions 1. *Bulletin of the Oxford University Institute of Economics & Statistics*, *19*(2), 99-124.

Moser, C. (2008). Assets and livelihoods: a framework for asset-based social policy. *Assets, livelihoods and social policy*, 43-82.

Nair, K. N., & Ramakumar, R. (2007). Agrarian distress and rural livelihoods: a study in Upputhara Panchayat, Idukki District, Kerala. *Working Paper No. 392*. Centre for Development Studies, Thiruvananthapuram.

Nguyen, M. C., & Winters, P. (2011). The impact of migration on food consumption patterns: The case of Vietnam. *Food Policy*, 36(1), 71-87.

Osili, U. O. (2004). Migrants and housing investments: Theory and evidence from Nigeria. *Economic development and cultural change*, *52*(4), 821-849.

Pajaron, M. (2016). Heterogeneity in the intrahousehold allocation of international remittances: evidence from Philippine households. *The Journal of Development Studies*, *52*(6), 854-875.

Papademetriou, D. G., & Martin, P. L. (1991). Labor migration and development: Research and policy issues. *The unsettled relationship: Labor migration and economic development*, *3*(3).

Prakash, B. A. (1988). Educated unemployment in Kerala: some observations based on a field study. *Working Paper No. 224*. Centre for Development Studies, Thiruvananthapuram.

Prakash, B. A. (1998). Gulf migration and its economic impact: The Kerala experience. *Economic and Political Weekly*, 3209-3213.

Quartey, P. (2006). The impact of migrant remittances on household welfare in Ghana.

Quisumbing, A. R., & De La Brière, B. (2000). Women's asset and intrahousehold allocation in rural Bangladesh: testing measures of bargaining power (No. 579-2016-39314).

Quisumbing, A. R., & Maluccio, J. A. (2000). *Intrahousehold allocation and gender relations: New empirical evidence from four developing countries* (No. 583-2016-39682).

Quisumbing, A. R., & Maluccio, J. A. (2003). Resources at marriage and intrahousehold allocation: Evidence from Bangladesh, Ethiopia, Indonesia, and South Africa. *Oxford Bulletin of Economics and Statistics*, *65*(3), 283-327.

Quisumbing, A., & McNiven, S. (2010). Moving forward, looking back: The impact of migration and remittances on assets, consumption, and credit constraints in the rural Philippines. *The Journal of Development Studies*, *46*(1), 91-113.

Rajan, S. I., & Zachariah, K. C. (2018a). Kerala Migration Survey 2016: New evidences. In *India Migration Report 2017* (pp. 289-305). Routledge India.

Rajan, S.I., & Zachariah, K.C. (2018b). International Migration, *Draft Thematic Paper 3*. International Labour Organization (ILO) at.http://cds.edu/wp-content/uploads/2018/05/ILO-CDS-Thematic-Paper-3.pdf.

Rajan, S. I., & Zachariah, K. C. (2018). Panel Data Analysis in Kerala Migration Surveys, 1998–2013. In *India Migration Report 2019* (pp. 330-343). Routledge India.

Rajan, S. I., & Zachariah, K. C. (2019). *Emigration and Remittances: New Evidences from the Kerala Migration Survey 2018* (No. id: 12989).

Rammohan, K. T. (2000). Assessing reassessment of Kerala model. *Economic and Political Weekly*, 1234-1236.

Rao, V., & Greene, M. (1991). *Marital instability, inter-spouse bargaining and their implications for fertility in Brazil: A multi-disciplinary analysis* (No. 91-3b). Chicago-Population Research Center.

Ravallion, M., & Chen, S. (2005). Hidden impact? Household saving in response to a poor-area development project. *Journal of public economics*, *89*(11-12), 2183-2204.

Rodriguez, E. R., & Tiongson, E. R. (2001). Temporary migration overseas and household labor supply: evidence from urban Philippines. *International Migration Review*, *35*(3), 709-725.

Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, *70*(1), 41-55.

Rosenzweig, M. R., & Stark, O. (1989). Consumption smoothing, migration, and marriage: Evidence from rural India. *Journal of political Economy*, *97*(4), 905-926.

Ruel, M. T. (2003). Operationalizing dietary diversity: a review of measurement issues and research priorities. *The Journal of nutrition*, *133*(11), 3911S-3926S.

Skeldon, R. (2018). *International migration, internal migration, mobility and urbanization: Towards more integrated approaches*. International Organization for Migration.

Shah, N. M., & Arnold, F. (1985). *The Non-Economic Consequences of Asian Labor Migration to the Middle East*. East-West Center, East-West Population Institute.

Sharma, A., & Chandrasekhar, S. (2016). Impact of commuting by workers on household dietary diversity in rural India. *Food policy*, *59*, 34-43.

Smith, J. A., & Todd, P. E. (2005). Does matching overcome LaLonde's critique of nonexperimental estimators? *Journal of econometrics*, *125*(1-2), 305-353.

Snow, J. (1855). *On the mode of communication of cholera*. John Churchill.

Srivastava, R., & Sasikumar, S. K. (2003, June). An overview of migration in India, its impacts and key issues. In *Regional Conference on Migration, Development and Pro-Poor Policy Choices in Asia* (pp. 22-24).

Stahl, C. W., & Arnold, F. (1986). Overseas workers' remittances in Asian development. *International Migration Review*, *20*(4), 899-925.

Stark, O., & Bloom, D. E. (1985). The new economics of labor migration. *The American Economic Review*, *75*(2), 173-178.

Stark, O., & Levhari, D. (1982). On migration and risk in LDCs. *Economic development and cultural change*, *31*(1), 191-196.

Stark, O., & Stark, O. (1991). The migration of labor.

Stark, O., & Taylor, J. E. (1991). Migration incentives, migration types: The role of relative deprivation. *The economic journal*, *101*(408), 1163-1178.

Stuart, E. A., Huskamp, H. A., Duckworth, K., Simmons, J., Song, Z., Chernew, M. E., & Barry, C. L. (2014). Using propensity scores in difference-in-differences models to estimate the effects of a policy change. *Health Services and Outcomes Research Methodology*, *14*(4), 166-182.

Taylor, J. E., & Mora, J. (2006). *Does migration reshape expenditures in rural households? Evidence from Mexico*. The World Bank.

Thapa, S., & Acharya, S. (2017). Remittances and household expenditure in Nepal: Evidence from cross-section data. *Economies*, *5*(2), 16.

Thomas, D. (1990). Intra-household resource allocation: An inferential approach. *Journal of human resources*, 635-664.

United Nations, Department of Economic and Social Affairs, Population Division (2017). *International Migration Report 2017*: Highlights (ST/ESA/SER.A/404).

United Nations, Department of Economic and Social Affairs, Population Division (2019). International Migration 2019: Report (ST/ESA/SER.A/438).

Wahba, J. (2015). Selection, selection, selection: the impact of return migration. *Journal of Population Economics*, *28*(3), 535-563.

Watkins, F. (2003). 'Save there, eat here': Migrants, households and community identity among Pakhtuns in northern Pakistan. *Contributions to Indian Sociology*, *37*(1-2), 59-81.

Wiest, R. E. (1984). External dependency and the perpetuation of temporary migration to the United States. *Patterns of undocumented migration: Mexico and the United States*, 110-135.

Woodruff, C. M., & Zenteno, R. (2001). Remittances and microenterprises in Mexico. *UCSD, Graduate School of International Relations and Pacific Studies Working Paper*.

The World Bank (2018). *Migration and Development Brief 29*. World Bank, Washington DC.

The World Bank (2016). Migration and Remittances Factbook 2016, 3rd edition. Washington, DC: World Bank.

Yabiku, S. T., Agadjanian, V., & Sevoyan, A. (2010). Husbands' labour migration and wives' autonomy, Mozambique 2000-2006. *Population Studies*, 64(3), 293–306.

Yang, D. (2008). International migration, remittances and household investment: Evidence from Philippine migrants' exchange rate shocks. *The Economic Journal*, *118*(528), 591-630.

Zachariah, K. C., Mathew, E. T., & Rajan, S. I. (1999). Migration in Kerala State, India: dimensions, determinants and consequences *Working Paper No. 1*. Centre for Development Studies, Thiruvananthapuram.

Zachariah, K. C., Mathew, E. T., & Rajan, S. I. (2001). Social, economic and demographic consequences of migration on Kerala. *International migration*, *39*(2), 43-71.

Zachariah, K. C., Mathew, E. T., & Rajan, S. I. (2003). *Dynamics of migration in Kerala: Dimensions, differentials, and consequences*. Orient Blackswan.

Zachariah, K. C., & Rajan, S. I. (2011). Impact of remittances of non-resident Keralites on Kerala's economy and society. *Indian Journal of Labour Economics*, *54*(3), 503-526.

Zachariah, K. C., & Rajan, S. I. (2015a). Dynamics of emigration and remittances in Kerala: Results from the Kerala migration survey 2014. *Working Paper No. 463*. Centre for Development Studies, Thiruvananthapuram.

Zachariah, K. C., & Rajan, S. I. (2015b). *Researching international migration: Lessons from the Kerala experience*. Routledge.

Zachariah, K. C., & Rajan, S. I. (2016). Kerala migration study 2014. *Economic and Political Weekly*, *6*.

Zachariah, K.C. and S. Irudaya Rajan (2018). Macro-Economic Impact of Remittances. In *Emigration from Kerala: End of an Era* (First). Kochi: RedInk.

Zellner, A. (1962). An efficient method of estimating seemingly unrelated regressions and tests for aggregation bias. *Journal of the American statistical Association*, *57*(298), 348-368.

Zezza, A., Carletto, C., Davis, B., & Winters, P. (2011). Assessing the impact of migration on food .and nutrition security. *Food Policy*, 36(1), 1-6.