

SERVICES TRADE AND CHOICE OF INDUSTRIES

STUDYING INTERGENERATIONAL MOBILITY OF INDIAN WORKERS

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THE STARTING POINT

- India experienced a structural change towards services industries in the last two decades
- One of the main driver of this growth is tremendous expansion services export demand (Gordon and Gupta, 2004)
- Expansion of services export is attributable to advances in information and telecommunication technologies (Raychaudhuri and De, 2012).
- Services trade liberalization may benefit the following services including transportation, insurance and finance, communication, travel, and professional services. (Deardorff , 2001)
- In India, tradable and liberalized services have grown faster than non-tradable and controlled services and increased export demand and net domestic demand are the main drivers of services sector growth. (Eichengreen and Gupta, 2010)



- Technological Progress leads to decline in relative importance of initial condition and improvement in mobility of high ability individuals in technologically advanced sectors. (Galor and Tsiddon, 1997).
- Greater access to foreign education and sources for credit and technological advancements in telecommunication services have tended to widen the range of opportunities to the younger generation. (Jones, 2008)



OUR OBJECTIVE

- To trace the performance of the various services sectors in total services export.
- To look into Indian labour market to get an idea about intergenerational job choices of Indian workers.
- To explore whether growing services trade in India has impacted on the intergenerational mobility of the Indian households/workers towards as well as within services industry.



DATA SOURCES: EMPLOYMENT

- ‘Employment-Unemployment’ household surveys conducted by National Sample Survey Organization of India.
 - The 55th Round (1999-2000)
 - The 61st Round (2004-2005)
 - The 66th Round (2009-2010)
 - The 68th Round (2011-2012)



DATA SOURCES: SERVICES EXPORT

- Trade in Services Database (TSD_February 2015) version 8.9.
 - The dataset contains data on bilateral services trade flows for the 248 countries as reporters and partners plus a rest of world.
 - BOP Manual 5 categorisation of Services is followed.
 - Francois et al. (2013) mention that this database provides a consolidated and reconciled version of multiple sources of bilateral trade data.
 - Collection of Data from OECD, Eurostat, UN and IMF bilateral trade flows
 - Data Range 1981 to 2010.

- UN Services Trade Database
<https://comtrade.un.org/data/>



**Export Performance of Indian Services Industries during 1995-96 to 1999-2000
(Corresponding to the NSSO 55th Round)**

Panel A: India's Services Export Volume (in US \$ million)												
	Transportation	Travel	Communications	Construction	Insurance_services	Financial_services	Computer_information_services	Other Business Services	Personal_cultural_and_recreational_services	Government_services_n.i.e.	Services_not_allocated	Total_EBOPS_Services
1995-96	1890	2582	56	49	170	15	14	2122		34	30	6932
1996-97	1989	2831	55	103	210	35	30	2149		75	66	7482
1997-98	1942	2890	42	103	229	32	51	3865	8	185	61	9346
1998-99	1773	2949	40	98	230	21	61	6115	8	624	61	11919
1999-00	1844	3010	50	161	238	63	59	8972	4	503	58	14903
Total	9438	14261	242	514	1077	166	214	23224	20	1422	276	50583

Panel B: Percentage Share of the Sector in Total Services Export											
	Transportation	Travel	Communications	Construction	Insurance_services	Financial_services	Computer_information_services	Other Business Services	Personal_cultural_and_recreational_services	Government_services_n.i.e.	Services_not_allocated
1995-96	27.27	37.24	0.81	0.71	2.45	0.21	0.20	30.62	0.00	0.49	0.43
1996-97	26.58	37.84	0.73	1.37	2.81	0.47	0.40	28.72	0.00	1.01	0.89
1997-98	20.78	30.92	0.45	1.10	2.45	0.34	0.54	41.35	0.08	1.98	0.65
1998-99	14.88	24.74	0.34	0.82	1.93	0.18	0.51	51.31	0.07	5.24	0.51
1999-00	12.37	20.19	0.33	1.08	1.60	0.42	0.39	60.20	0.03	3.38	0.39
Average Share of sector	20.38	30.19	0.53	1.02	2.25	0.32	0.41	42.44	0.04	2.42	0.57

Source: Author's calculation based on Trade in Services Database (TSD_February 2015) version

8.9. <https://datacatalog.worldbank.org/dataset/trade-services-database>

**Export Performance of Indian Services Industries during 2000-01 to 2004-05
(Corresponding to the NSSO 61st Round)**

Panel A: India's Services Export Volume (in US \$ million)												
	Transportation	Travel	Communications	Construction	Insurance_services	Financial_services	Computer_informati on_servic es	Other Business Services	Personal _cultural _and_re creation al_servi ces	Government_s ervices _n.i.e.	Services _not_allo cated	Total_EBO PS_Servic es
2000-01	1979	3460	599	502	257	276	4727	4253	7	654	87	16713
2001-02	2050	3198	1104	104	282	306	7407	2451	8	538	77	17449
2002-03	2473	3263	779	231	332	598	8889	2803	9	353	64	19731
2003-04	3022	4463	969	276	408	367	11876	2277	50	269	4881	23975
2004-05	4373	6170	1094	516	842	341	16344	8325	46	350	5740	38400
Total	13897	20553	4545	1630	2121	1888	49244	20109	119	2163	10850	116269
CAGR	17.2%	12.3%	12.8%	0.6%	26.8%	4.3%	28.2%	14.4%	45.6%	-11.7%	130.9%	18.1%

Panel B: Percentage Share of the Sector in Total Services Export											
	Transportation	Travel	Communications	Construction	Insurance_services	Financial_services	Computer_informati on_servic es	Other Business Services	Personal _cultural _and_rec reational _services	Government _services_n.i .e.	Services_not _allocated
2000-01	11.84	20.70	3.58	3.00	1.54	1.65	28.29	25.45	0.04	3.91	0.52
2001-02	11.75	18.33	6.33	0.60	1.62	1.75	42.45	14.05	0.04	3.08	0.44
2002-03	12.54	16.54	3.95	1.17	1.68	3.03	45.05	14.21	0.04	1.79	0.33
2003-04	12.60	18.61	4.04	1.15	1.70	1.53	49.53	9.50	0.21	1.12	20.36
2004-05	11.39	16.07	2.85	1.34	2.19	0.89	42.56	21.68	0.12	0.91	14.95
Average Share of sector	12.02	18.05	4.15	1.45	1.75	1.77	41.58	16.98	0.09	2.16	7.32

Source: Author's calculation based on Trade in Services Database (TSD_February 2015) version

8.9. <https://datacatalog.worldbank.org/dataset/trade-services-database>

Export Performance of Indian Services Industries during 2005-06 to 2009-10
(Corresponding to the NSSO 66th Round)

Panel A: India's Services Export Volume (in US \$ million)												
	Transportation	Travel	Communications	Construction	Insurance_services	Financial_services	Computer_information_services	Other_Business_Services	Personal_cultural_and_recreational_services	Government_services_n.i.e.	Services_not_allocated	Total_EBOPS_Services
2005-06	5754	7493	1566	346	941	1143	21875	12970	111	328	8965	62273
2006-07	7561	8634	2181	619	1113	2357	29088	17605	306	274	12210	69738
2007-08	9035	10729	2348	753	1507	3379	37491	20911	510	317	15490	86980
2008-09	11318	11832	2423	722	1548	4059	49379	19038	707	387	19949	116693
2009-10	12921	11136	1486	837	1526	3661	46656	12001	467	406	19877	101460
Total	46589	49824	10004	3277	6635	14599	184489	82526	2101	1712	76491	437145
CAGR	17.6%	8.2%	-1.0%	19.3%	10.2%	26.2%	16.4%	-1.5%	33.3%	4.3%	17.3%	10.3%

Panel B: Percentage Share of the Sector in Total Services Export											
	Transportation	Travel	Communications	Construction	Insurance_services	Financial_services	Computer_information_services	Other_Business_Services	Personal_cultural_and_recreational_services	Government_services_n.i.e.	Services_not_allocated
2005-06	9.24	12.03	2.51	0.56	1.51	1.84	35.13	20.83	0.18	0.53	14.40
2006-07	10.84	12.38	3.13	0.89	1.60	3.38	41.71	25.24	0.44	0.39	17.51
2007-08	10.39	12.34	2.70	0.87	1.73	3.88	43.10	24.04	0.59	0.36	17.81
2008-09	9.70	10.14	2.08	0.62	1.33	3.48	42.32	16.31	0.61	0.33	17.10
2009-10	12.74	10.98	1.46	0.82	1.50	3.61	45.98	11.83	0.46	0.40	19.59
Average Share of sector	10.58	11.57	2.38	0.75	1.53	3.24	41.65	19.65	0.45	0.40	17.28

Source: Author's calculation based on Trade in Services Database (TSD_February 2015) version

8.9. <https://datacatalog.worldbank.org/dataset/trade-services-database>



**Export Performance of Indian Services Industries during 2007-08 to 2011-12
(Corresponding to the NSSO 68th Round)**

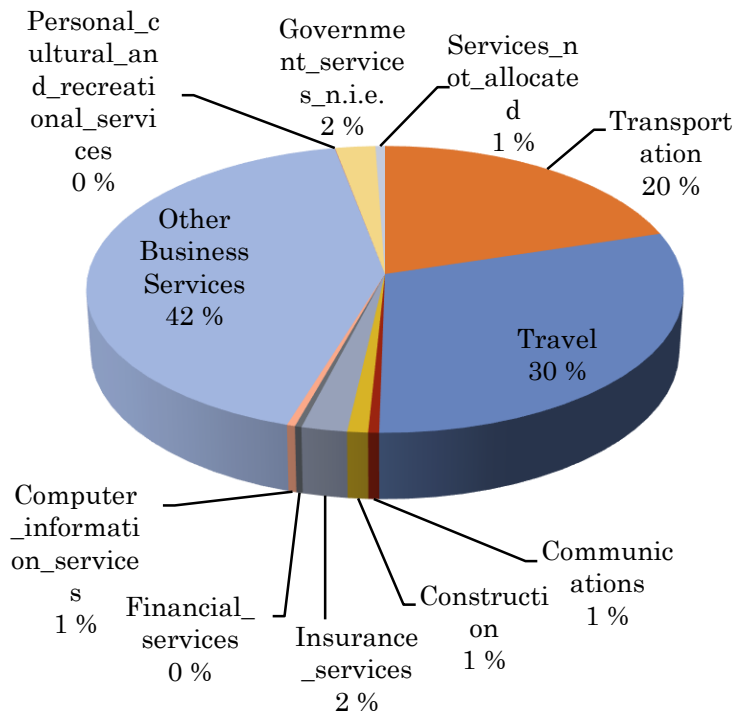
Panel A: India's Services Export Volume (in US \$ million)												
	Transportation	Travel	Communications	Construction	Insurance services	Financial services	Computer information services	Other Business Services	Personal_cultural_and_recreational_services	Government_services_n.i.e.	Services_not_allocated	Total_EBO_PS_Services
2007-08	9036	10729	2348	753	1506	3379	37491	40870	510	317	15490	86927
2008-09	11565	11832	2478	841	1559	4291	49112	53403	707	387	19949	107230
2009-10	10980	11136	1486	837	1526	3661	46656	50317	467	406	19877	93036
2010-11	13248	14160	1412	525	1782	5834	56878	62712	335	485	19904	124309
2011-12	17678	17707	1671	838	2585	6249	60446	66695	346	596	8948	138536
Total	44829	47857	7724	2956	6373	17165	190137	207302	2019	1595	75221	411502
CAGR	14.4%	10.5%	-6.6%	2.2%	11.4%	13.1%	10.0%	3.0%	-7.5%	13.5%	-10.4%	9.8%

Panel B: Percentage Share of the Sector in Total Services Export											
	Transportation	Travel	Communications	Construction	Insurance services	Financial services	Computer information services	Other Business Services	Personal_cultural_and_recreational_services	Government_services_n.i.e.	Services_not_allocated
2007-08	10.39	12.34	2.70	0.87	1.73	3.89	43.13	23.99	0.59	0.36	17.82
2008-09	10.79	11.03	2.31	0.78	1.45	4.00	45.80	17.74	0.66	0.36	18.60
2009-10	11.80	11.97	1.60	0.90	1.64	3.94	50.15	12.90	0.50	0.44	21.36
2010-11	10.66	11.39	1.14	0.42	1.43	4.69	45.76	17.53	0.27	0.39	16.01
2011-12	12.76	12.78	1.21	0.60	1.87	4.51	43.63	17.49	0.25	0.43	6.46
Average Share of sector	11.28	11.90	1.79	0.72	1.63	4.21	45.69	17.93	0.45	0.40	16.05

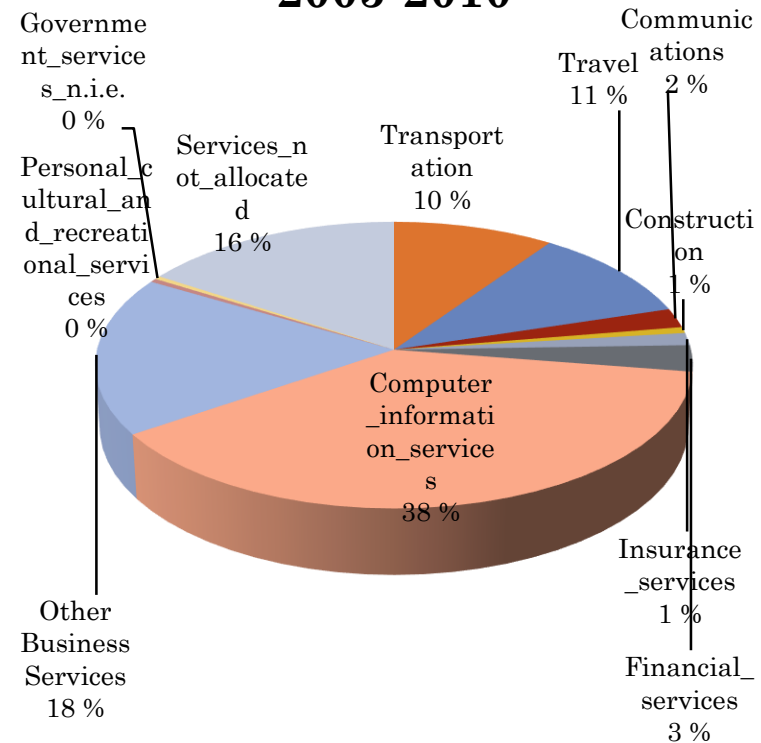
Source: Author's calculation based on UN Services Trade Database <https://comtrade.un.org/data/>

RELATIVE SHARE OF THE SERVICES SECTORS IN TOTAL SERVICES EXPORT:

Average Share of sectors 1995-2000



Average Share of sectors 2005-2010



LITERATURE ON INTERGENERATIONAL OCCUPATIONAL MOBILITY AND INDIAN EXPERIENCE:

- ❑ Hnatkovska et al. (2013) have used data from five successive rounds of the National Sample Survey (NSS) of India from 1983 to 2004–2005 to analyze patterns of intergenerational persistence in education attainment, occupation choices, and wages of both SC / ST and non- SC / ST households. They found convergence in the intergenerational mobility rates of SC / STs to non- SC / ST levels in both education attainment and wages.
- ❑ Nandi (2015) has found that intergenerational persistence depend on the effect of education, productive asset ownership and father's network.
- ❑ Ahsan & Chatterjee (2017) have developed a model of trade-induced entry, innovation, and intergenerational occupational mobility. The model predicts that, districts with greater exposure to trade liberalization will experience a larger improvement in upward intergenerational occupation mobility.

CHARACTERISTICS OF THE WORKING SAMPLE

- Characteristics of the Son
 - Urban men in the age group of 16 to 35
 - Part of the workforce and are not attending any educational institution.
 - Report their principal industry and principal occupation.
- Characteristics of the Father
 - Male Head of the Household
 - Report their principal industry and principal occupation.



Size of the working Sample

	Round			
	55 th Round (1999-2000)	61 st Round (2004-05)	66 th Round (2009-10)	68 th Round (2011-12)
Urban Population	225500	204808	178457	176236
Population reporting Principal Industry and Occupation	72550	68906	58838	58365
Father-Son Pairs	9134	8586	7345	6980

Source: Author's calculations based on NSSO Employment Unemployment Survey



Sample Summary Statistics

Variables	Panel A: Son					Panel B: Father			
	Age	Education	Marital Status	Principal Industry Group	Principal Occupation	Age	Education	Principal Industry Group	Principal Occupation
All									
1999-2000	23.86 (0.05)	7.32 (0.03)	1.38 (0.01)	4.65 (0.04)	5.79 (0.02)	53.79 (0.08)	5.65 (0.04)	5.20 (0.05)	5.59 (0.03)
2004-05	23.95 (0.05)	7.45 (0.03)	1.38 (0.01)	4.71 (0.04)	5.90 (0.03)	53.16 (0.08)	5.61 (0.04)	5.08 (0.05)	5.79 (0.03)
2009-10	24.58 (0.06)	7.98 (0.03)	1.38 (0.01)	4.83 (0.05)	5.44 (0.03)	53.61 (0.08)	5.87 (0.04)	5.04 (0.05)	5.41 (0.03)
2011-12	24.93 (0.06)	8.16 (0.04)	1.40 (0.01)	5.25 (0.05)	5.38 (0.03)	54.07 (0.08)	6.01 (0.04)	5.23 (0.06)	5.25 (0.03)
Non-SC/ST									
1999-2000	24.54 (0.07)	8.13 (0.05)	1.39 (0.01)	4.76 (0.06)	5.27 (0.04)	54.55 (0.11)	6.63 (0.05)	5.26 (0.07)	5.00 (0.04)
2004-05	24.56 (0.08)	8.19 (0.05)	1.39 (0.01)	4.85 (0.07)	5.30 (0.04)	53.77 (0.12)	6.54 (0.06)	5.21 (0.08)	5.13 (0.04)
2009-10	25.42 (0.09)	8.76 (0.05)	1.40 (0.01)	5.07 (0.07)	4.67 (0.05)	54.45 (0.13)	6.90 (0.06)	5.21 (0.08)	4.58 (0.05)
2011-12	25.67 (0.09)	8.91 (0.06)	1.44 (0.01)	5.52 (0.08)	4.73 (0.05)	54.83 (0.14)	6.95 (0.07)	5.36 (0.09)	4.56 (0.06)
SC/ST									
1999-2000	23.20 (0.07)	6.52 (0.04)	1.36 (0.01)	4.53 (0.06)	6.31 (0.03)	53.05 (0.12)	4.70 (0.05)	5.14 (0.07)	6.16 (0.04)
2004-05	23.55 (0.07)	6.96 (0.04)	1.37 (0.01)	4.61 (0.06)	6.29 (0.03)	52.76 (0.11)	5.00 (0.04)	5.00 (0.07)	6.22 (0.03)
2009-10	24.03 (0.07)	7.46 (0.04)	1.37 (0.01)	4.67 (0.06)	5.95 (0.04)	53.06 (0.11)	5.19 (0.05)	4.94 (0.07)	5.95 (0.04)
2011-12	24.48 (0.07)	7.71 (0.04)	1.38 (0.01)	5.09 (0.07)	5.77 (0.04)	53.61 (0.11)	5.44 (0.05)	5.15 (0.07)	5.67 (0.04)

Source: Author's calculations based on NSSO Employment Unemployment Survey for the three rounds.



SAMPLE SUMMARY STATISTICS

- Average age of the sons: 23 years
- Average age of the fathers: 53 years
- Sons are better educated than their fathers.
- Level of education of the general caste is much higher than that of SC/STs



INTERGENERATIONAL MOBILITY ACROSS INDUSTRIES




Incidence of Intergenerational Persistence

	55th Round (1999-2000)	61st Round (2004-2005)	66th Round (2009-2010)	68th Round (2011-2012)	55th Round (1999-2000)	61st Round (2004-2005)	66th Round (2009-2010)	68th Round (2011-2012)
	Without Sample weight				With Sample weight			
All	56.93	54.02	57.25	53.72	53.86	51.21	55.11	51.12
Age								
16-20 Years	55.56	55.13	60.51	55.83	52.39	49.40	56.81	55.76
21-25 Years	57.04	52.95	54.24	51.23	53.42	51.34	51.1	49.79
26-30 Years	56.16	52.99	56.63	54.16	55.28	52.23	57.02	48.62
31-35 Years	62.46	56.98	61.25	56.04	57.74	54.35	61.09	52.56
Education								
No Education	61.56	60.48	68.09	59.01	60.78	56.89	64.16	57.75
Primary Education	55.94	55.38	61	57.50	54.82	50.81	61.31	59.29
Secondary Education	56.95	55.19	58.04	55.2	53.12	53.03	57.6	52.27
Higher Secondary Education	53.49	53.62	58.61	55.15	61.58	51.27	55.11	51.78
More than Higher Secondary Education	52.74	45.68	47.65	46.1	45.89	43.74	41.91	40.79
Caste								
General	59.86	56.87	60.23	54.67	55.25	54.07	58.96	52.45
Scheduled Caste	50.04	47.22	49.05	48.27	50.58	43.57	45.44	48.86
Scheduled Tribe	51.47	50.46	50.71	52.23	42.48	45.82	39.39	46.77
Other Backward Class	55.98	43.57	58.36	55.01	54.49	51.69	56.07	51.13
Religion								
Hindu	56.39	52.71	55.78	52.79	52.65	49.56	54.06	48.87
Muslim	58.79	58.34	63.03	56.04	58.52	56.21	61.37	58.36
Christian	44.19	55.05	49.69	51.41	29.67	49.73	38.56	38.06
Others	64.46	54.18	62.79	59.11	63.16	49.73	55.38	55.90

Source: Author's calculations based on NSSO Employment Unemployment Survey for the four rounds.



INCIDENCE OF INTERGENERATIONAL PERSISTENCE

- For the whole sample, the average level of persistence is around 55 %.
 - Younger sons are relatively less persistent.
 - Degree of persistence falls with increased level of education.
 - For the SC/STs, level of persistence is considerably lower.
- 

REGRESSION ANALYSIS

- *We define, Persistence as*

$$y_i = \begin{cases} 1 & \text{if son's industry group is same as his father's industry group} \\ 0 & \text{if son's industry group differs from that of his father} \end{cases}$$

- *The Probit model specifies*

$$p_i = \Pr[y_i = 1 | x_i] = \Phi(x_i' \beta)$$

Where $\Phi(\cdot)$ is the standard normal cumulative distribution function and

$$x_i' \beta = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{age}_i^2 + \beta_3 \text{Fatherage}_i + \beta_4 \text{married}_i + \theta' E + \alpha' R + \gamma' SG \\ + \delta' HT + \varepsilon' FE + \mu' FO + \rho' FS + \sigma' SSE + \tau' SEG$$



Summary Estimation Results: Set 1: Household Characteristics

Variables	1999-2000	2004-05	2009-10	2011-12
Age	0.0147 (0.028)	-0.0331 (0.028)	-0.0394 (0.031)	-0.0365 (0.032)
Age Squared	-0.0002 (0.001)	0.0005 (0.001)	0.0007 (0.001)	0.0007 (0.001)
Father's Age	-0.0017 (0.002)	-0.0049** (0.002)	-0.0038 (0.003)	-0.0012 (0.003)
Married	0.0414 (0.038)	0.2160*** (0.038)	0.1715*** (0.040)	0.1316*** (0.040)
Education				
Primary Education	-0.1165** (0.052)	-0.0982* (0.055)	-0.1342* (0.072)	-0.0364 (0.073)
Secondary Education	-0.0620 (0.048)	-0.0768 (0.052)	-0.1996** (0.067)	-0.0780 (0.070)
Higher Secondary Education	-0.1419 (0.202)	-0.1218* (0.066)	-0.1589** (0.077)	-0.0869 (0.079)
More than Higher Secondary Education	-0.1682*** (0.062)	-0.2702*** (0.063)	-0.3660*** (0.076)	-0.2557*** (0.076)
Religion				
Muslim	-0.0893** (0.038)	-0.0494 (0.039)	0.0108 (0.042)	-0.0775* (0.041)
Christian	-0.1789** (0.089)	0.2482*** (0.092)	-0.0114 (0.091)	-0.0241 (0.093)
Others	0.1845** (0.071)	0.0822 (0.070)	0.1488* (0.078)	0.1042 (0.078)
Social Group				
Scheduled Tribe	-0.0534 (0.080)	-0.2625*** (0.082)	-0.1409* (0.082)	-0.0167 (0.080)
Scheduled Caste	-0.1983*** (0.049)	-0.2031*** (0.047)	-0.2368*** (0.051)	-0.1298** (0.053)
Other Backward Class	-0.1187*** (0.034)	-0.1367*** (0.033)	-0.0904** (0.036)	-0.0494 (0.036)
Household Type				
Wage Earners	-1.0609*** (0.035)	-1.0990*** (0.035)	-1.0742*** (0.038)	-0.8903*** (0.037)
Casual Labour	-0.3106*** (0.044)	-0.3361*** (0.044)	-0.2707*** (0.045)	-0.1390*** (0.047)
Other	-0.3593*** (0.106)	-0.0754 (0.116)	-0.5911*** (0.111)	0.4462** (0.194)
Log pseudolikelihood	-5015.03	-5303.2959	-4469.72	-4443.0808
Number of observations	8105	8573	7334	6975

* Denotes estimate is significant at 10 per cent level of significance.
 ** Denotes estimate is significant at 5 per cent level of significance.
 *** Denotes estimate is significant at 1 per cent level of significance.
 Blank space denotes estimate is not significant.
 Figures in the parenthesis depicts the robust standard error.



Summary Estimation Results: Set 2: Household Characteristics + Father's Network

Variables	1999-2000	2004-05	2009-10	2011-12
Age	0.0310 (0.029)	-0.0303 (0.028)	-0.0417 (0.032)	-0.0441 (0.032)
Age Squared	-0.0005 (0.001)	0.0005 (0.001)	0.0008 (0.001)	0.0008 (0.001)
Father's Age	-0.0034 (0.002)	-0.0059** (0.002)	-0.0049* (0.003)	-0.0011 (0.003)
Married	0.0544 (0.040)	0.2176*** (0.038)	0.1842*** (0.040)	0.1397*** (0.040)
Education				
Primary Education	-0.1371** (0.054)	-0.1181** (0.057)	-0.1554** (0.074)	-0.0692 (0.075)
Secondary Education	-0.0814 (0.052)	-0.1096** (0.056)	-0.2621*** (0.070)	-0.1577** (0.072)
Higher Secondary Education	-0.0996 (0.242)	-0.1487** (0.070)	-0.2451*** (0.081)	-0.2161*** (0.083)
More than Higher Secondary Education	-0.1380* (0.072)	-0.2858*** (0.071)	-0.4614*** (0.082)	-0.4232*** (0.084)
Religion				
Muslim	-0.1040*** (0.039)	-0.0530 (0.039)	-0.0074 (0.042)	-0.0610 (0.041)
Christian	-0.1451 (0.092)	0.2545*** (0.092)	0.0162 (0.092)	-0.0328 (0.094)
Others	0.1910*** (0.072)	0.0764 (0.070)	0.1382* (0.079)	0.1059 (0.078)
Social Group				
Scheduled Tribe	-0.0756 (0.082)	-0.2517*** (0.083)	-0.1245 (0.084)	-0.0014 (0.080)
Scheduled Caste	-0.1858*** (0.051)	-0.1764*** (0.048)	-0.1834*** (0.052)	-0.0771 (0.054)
Other Backward Class	-0.1284*** (0.035)	-0.1282*** (0.033)	-0.0828** (0.037)	-0.0306 (0.036)
Household Type				
Wage Earners	-0.6194*** (0.070)	-0.8442*** (0.061)	-0.8743*** (0.069)	-0.8233*** (0.070)
Casual Labour	-0.3893*** (0.080)	-0.3554*** (0.075)	-0.3686*** (0.085)	-0.1046 (0.093)
Other	-0.2450** (0.108)	0.0188 (0.119)	-0.5214*** (0.114)	0.4822** (0.194)
Father's education				
Primary Education	0.0516 (0.041)	0.0537 (0.040)	0.0175 (0.045)	0.0754 (0.046)
Secondary Education	-0.0129 (0.046)	-0.0074 (0.044)	0.0492 (0.048)	0.1327*** (0.049)
Higher Secondary Education	-0.3147 (0.356)	0.056 (0.075)	0.0852 (0.074)	0.3369*** (0.076)
More than Higher Secondary Education	0.0505 (0.077)	-0.0250 (0.070)	-0.0405 (0.073)	0.1387* (0.071)



SUMMARY ESTIMATION RESULTS: SET 2: HOUSEHOLD CHARACTERISTICS + FATHER'S NETWORK...CONTD..

	1999-2000	2004-05	2009-10	2011-12
Father's Occupation				
White-collar Jobs	0.0370 (0.060)	0.0752 (0.055)	0.3592*** (0.059)	0.2637*** (0.060)
Clerical and service-oriented Jobs	0.2655*** (0.054)	0.2675*** (0.050)	0.3812*** (0.058)	0.2328*** (0.060)
Skilled agricultural and manufacturing Jobs	0.1657*** (0.047)	0.0881** (0.044)	0.2505*** (0.049)	0.1570*** (0.051)
Father's Activity Status				
Wage Earners	-0.4836*** (0.071)	-0.3077*** (0.064)	-0.2303*** (0.072)	-0.0754 (0.074)
Casual Labour	0.1668** (0.081)	0.0852 (0.076)	0.2355*** (0.084)	0.0686 (0.091)
Log pseudolikelihood	-4751.22	-5233.8715	-4428.81	-4417.9344
Number of observations	7731	8572	7333	6975

* Denotes estimate is significant at 10 per cent level of significance.

** Denotes estimate is significant at 5 per cent level of significance.

*** Denotes estimate is significant at 1 per cent level of significance.

Blank space denotes estimate is not significant

Figures in the parenthesis depicts the robust standard error.



Summary Estimation Results: Set 3: Household Characteristics + Father's Network + Impact of Services Trade

Variables	1999-2000	2004-05	2009-10	2011-12
Age	0.0464 (0.029)	-0.0140 (0.029)	-0.0241 (0.032)	-0.0140 (0.032)
Age Squared	-0.0008 (0.001)	0.0002 (0.001)	0.0004 (0.001)	0.0002 (0.001)
Father's Age	-0.0037 (0.002)	-0.0062** (0.002)	-0.0053** (0.003)	-0.0013 (0.002)
Married	0.0493 (0.040)	0.1995*** (0.038)	0.1875*** (0.041)	0.1355*** (0.040)
Education				
Primary Education	-0.1514*** (0.054)	-0.1209** (0.057)	-0.1336* (0.075)	-0.0724 (0.076)
Secondary Education	-0.1001* (0.053)	-0.1115** (0.057)	-0.2589*** (0.071)	-0.1319* (0.073)
Higher Secondary Education	-0.1876 (0.239)	-0.1638** (0.071)	-0.2570*** (0.083)	-0.2071** (0.084)
More than Higher Secondary Education	-0.1303* (0.074)	-0.2895*** (0.072)	-0.4538*** (0.084)	-0.3678*** (0.085)
Religion				
Muslim	-0.0970*** (0.039)	-0.0473 (0.039)	0.0106 (0.043)	-0.0564 (0.042)
Christian	-0.1525* (0.093)	0.2676*** (0.092)	-0.0131 (0.093)	0.0005 (0.096)
Others	0.1956*** (0.073)	0.0730 (0.072)	0.1223 (0.080)	0.1048 (0.078)
Social Group				
Scheduled Tribe	-0.0951 (0.082)	-0.2785*** (0.083)	-0.0925 (0.086)	-0.0168 (0.081)
Scheduled Caste	-0.1909*** (0.051)	-0.1688*** (0.049)	-0.1623*** (0.053)	-0.0947* (0.054)
Other Backward Class	-0.1317*** (0.036)	-0.1337*** (0.034)	-0.0851** (0.037)	-0.0273 (0.037)
Household Type				
Wage Earners	-0.6227*** (0.071)	-0.8391*** (0.062)	-0.8715*** (0.070)	-0.8045*** (0.072)
Casual Labour	-0.4194*** (0.080)	-0.3841*** (0.075)	-0.3232*** (0.087)	-0.1632* (0.093)
Other	-0.2618** (0.110)	0.0659 (0.117)	-0.5867*** (0.114)	0.4866** (0.193)
Father's education				
Primary Education	0.0568 (0.041)	0.0546 (0.041)	0.0079 (0.046)	0.0656 (0.046)
Secondary Education	-0.0053 (0.046)	-0.0186 (0.044)	0.0402 (0.048)	0.1259** (0.049)
Higher Secondary Education	-0.2737 (0.352)	0.0679 (0.077)	0.0559 (0.075)	0.3187*** (0.078)
More than Higher Secondary Education	0.0919 (0.079)	0.0075 (0.071)	-0.0095 (0.075)	0.1460** (0.073)



SUMMARY ESTIMATION RESULTS: SET 3: HOUSEHOLD CHARACTERISTICS + FATHER'S NETWORK + IMPACT OF SERVICES TRADE...CONTD..

	1999-2000	2004-05	2009-10	2011-12
Father's Occupation				
White-collar Jobs	-0.0012 (0.060)	0.0554 (0.047)	0.3159*** (0.060)	0.2547*** (0.061)
Clerical and service-oriented Jobs	0.2134*** (0.055)	0.2063*** (0.050)	0.3130*** (0.059)	0.2034*** (0.061)
Skilled agricultural and manufacturing Jobs	0.1275*** (0.049)	0.3580** (0.045)	0.1947*** (0.050)	0.1338*** (0.052)
Father's Activity Status				
Wage Earners	-0.4637*** (0.072)	-0.3018*** (0.065)	-0.2189*** (0.073)	-0.0479 (0.076)
Casual Labour	0.2023** (0.081)	0.0940 (0.076)	0.2587*** (0.084)	0.0996 (0.092)
Share of Sector in Total Services Export				
Moderate	-0.5095*** (0.060)	0.3648*** (0.128)	-0.4565*** (0.065)	-0.4584*** (0.061)
High	-1.0218*** (0.123)	-1.1554*** (0.250)	-1.7259*** (0.274)	-2.3513*** (0.411)
Services Export Growth Rate				
Moderate	---	-1.0082*** (0.119)	-0.3251*** (0.046)	-0.2658*** (0.064)
High	---	-0.2288*** (0.076)	-0.1691** (0.077)	---
Log pseudolikelihood	-4675.06	-5105.5296	-4290.45	-4278.5325
Number of observations	7731	8572	7333	6975

* Denotes estimate is significant at 10 per cent level of significance.
 ** Denotes estimate is significant at 5 per cent level of significance.
 *** Denotes estimate is significant at 1 per cent level of significance.
 Blank space denotes estimate is not significant.
 Figures in the parenthesis depicts the robust standard error.




ESTIMATION RESULTS: AT A GLANCE

- Explanatory variables with Significant Positive Impact on Persistence:
 - Marital status: Married sons are more persistent in his choice of industries than unmarried sons.
 - Father's Occupation: compared to the fathers engaged in elementary occupation, the sons of fathers belonging to White collar jobs, clerical or service jobs are more likely to be persistent.
 - Father's status: compared to self employed fathers, the sons of casual workers are more likely to stick to their father's profession.
 - Father's Education: though this variable was not significant in the previous three rounds of survey, however, in the 68th round it has a significant positive impact on persistence. Fathers who are educated up to or above higher secondary level are more likely to have their sons in the same industry.



ESTIMATION RESULTS: AT A GLANCE

- Explanatory variables with Significant Negative Impact on Persistence:
 - Son's Education: Sons with more than higher secondary level of education are more likely to switch jobs.
 - Social Group: Compared to general category, sons belonging to Scheduled Caste, scheduled tribe or other backward classes were more likely to choose industry of operation different from their fathers.
 - Household Type: In all four rounds of survey, compared to the self-employed type of households, the wage earners and casual workers are less likely to be persistent in their choice of industries over the generations.
- 

ESTIMATION RESULTS: AT A GLANCE

- Controlling for individual and household characteristics and father's network, we see that the services export performance plays a significant negative role on persistence. Compared to non-tradable services, higher the export performance of the service sectors, greater is the chance of sons moving out of their traditional choices and move into the sectors where new type of employment is being generated.



MOBILITY ACROSS PRINCIPAL INDUSTRY GROUPS



Industry Groups

Industry Group	Description	Industry Group	Description
1	Agriculture	10	Insurance and Pension
2	Manufacturing	11	Real Estate and Renting
3	Construction	12	Computer and Related Activities
4	Wholesale and Retail Trade	13	Other Business Services
5	Hotel and Restaurant	14	Public Administration and Defense
6	Transport and Storage	15	Education
7	Travel	16	Health and Social Work
8	Post and Telecommunication	17	Other Community, Social and Personal Services
9	Financial Services	18	Other Services

Source: Author's creation on the basis of NIC-1998 and NIC-2004 at 5-digit level



Mobility across Principal Industry Groups: 55th Round (1999-2000) (Number of individuals) (weighted)

Father Industry Group	Son Industry Group																		Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	600 (53)	99 (9)	108 (10)	180 (16)	20 (2)	58 (5)	0 (0)	1 (0)	2 (0)	0 (0)	5 (0)	0 (0)	6 (1)	22 (2)	16 (1)	5 (0)	8 (1)	0 (0)	1132 (12)
2	16 (1)	1284 (65)	105 (5)	341 (17)	19 (1)	72 (4)	1 (0)	10 (0)	20 (1)	2 (0)	4 (0)	13 (1)	26 (1)	9 (0)	16 (1)	9 (0)	26 (1)	0 (0)	1972 (22)
3	14 (2)	89 (12)	433 (57)	130 (17)	8 (1)	37 (5)	0 (0)	1 (0)	5 (1)	0 (0)	3 (0)	0 (0)	5 (1)	1 (0)	7 (1)	2 (0)	22 (3)	2 (0)	759 (8)
4	42 (2)	227 (9)	117 (5)	1775 (72)	24 (1)	117 (5)	1 (0)	13 (1)	22 (1)	3 (0)	3 (0)	12 (1)	23 (1)	10 (0)	30 (1)	12 (1)	16 (1)	3 (0)	2450 (27)
5	5 (2)	42 (14)	13 (4)	50 (16)	173 (56)	16 (5)	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (1)	1 (0)	0 (0)	3 (1)	0 (0)	307 (3)
6	20 (2)	159 (19)	73 (8)	260 (30)	20 (2)	266 (31)	3 (0)	5 (1)	5 (1)	0 (0)	2 (0)	8 (1)	7 (1)	2 (0)	12 (1)	4 (0)	9 (1)	4 (0)	860 (9)
7	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (7)	0 (0)	0 (0)	0 (0)	0 (0)	3 (75)	1 (17)	0 (0)	0 (0)	0 (0)	0 (1)	0 (0)	4 (0)
8	1 (1)	10 (22)	1 (2)	8 (16)	3 (7)	6 (13)	0 (0)	9 (18)	0 (0)	1 (1)	0 (0)	0 (0)	6 (13)	1 (1)	1 (1)	1 (3)	1 (2)	0 (0)	48 (1)
9	2 (2)	19 (21)	0 (0)	25 (28)	2 (3)	3 (4)	0 (0)	2 (2)	17 (19)	2 (2)	0 (0)	3 (3)	8 (9)	0 (0)	4 (5)	0 (0)	1 (2)	0 (0)	88 (1)
10	0 (0)	3 (66)	0 (0)	1 (15)	0 (0)	0 (0)	0 (0)	0 (0)	1 (17)	0 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	5 (0)
11	0 (0)	2 (5)	0 (0)	13 (33)	2 (4)	5 (13)	0 (0)	0 (0)	1 (1)	0 (0)	14 (36)	0 (0)	1 (2)	0 (0)	1 (3)	0 (0)	1 (3)	0 (0)	39 (0)
13	5 (5)	12 (11)	4 (4)	20 (19)	3 (2)	7 (6)	0 (0)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	41 (38)	1 (1)	7 (6)	2 (2)	2 (2)	0 (0)	108 (1)
14	18 (3)	99 (15)	66 (10)	179 (28)	9 (1)	48 (7)	0 (0)	6 (1)	16 (3)	0 (0)	5 (1)	18 (3)	20 (3)	85 (13)	40 (6)	12 (2)	20 (3)	1 (0)	640 (7)
15	5 (2)	51 (23)	5 (2)	89 (41)	1 (1)	11 (5)	0 (0)	6 (3)	0 (0)	0 (0)	2 (1)	1 (0)	14 (6)	2 (1)	24 (11)	3 (2)	5 (2)	0 (0)	218 (2)
16	1 (2)	23 (30)	3 (4)	22 (29)	1 (1)	3 (4)	1 (1)	1 (1)	0 (0)	0 (0)	2 (2)	1 (1)	2 (3)	2 (3)	2 (3)	12 (15)	1 (2)	0 (0)	77 (1)
17	8 (2)	39 (11)	33 (9)	60 (17)	1 (0)	13 (4)	0 (0)	0 (0)	2 (0)	1 (0)	1 (0)	0 (0)	5 (1)	5 (1)	5 (1)	6 (2)	174 (49)	2 (0)	355 (4)
18	0 (0)	17 (24)	0 (0)	21 (30)	2 (2)	6 (8)	0 (0)	0 (0)	3 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (4)	8 (11)	13 (18)	72 (1)
Total	737 (8)	2176 (24)	962 (11)	3173 (35)	288 (3)	668 (7)	6 (0)	54 (1)	95 (1)	10 (0)	41 (0)	59 (1)	166 (2)	142 (2)	167 (2)	71 (1)	297 (3)	24 (0)	9134

1-Agriculture, 2-manufacturing, 3-Construction, 4-Wholesale and Retail Trade, 5- Hotel and Restaurant, 6- Transport and Storage, 7- Travel, 8-Post and Telecommunication, 9- Financial Services, 10-Insurance and Pension, 11-Real Estate and Renting, 12- Computer and Related Activities, 13- Other Business Services, 14- Public Administration and Defense, 15- Education, 16- Health and Social Work, 17- Other Community, Social and Personal Services, 18- Other Services

Source: Author's calculations based on NSSO Employment Unemployment Survey-55th Round

(Figures in the parenthesis of each row show percentage of sons engaged in various industries for each of father's category)

(Figures in the parenthesis of the last column depicts the percentage of fathers belonging to different industries)



Mobility across Principal Industry Groups: 61st Round (2004-05) (Number of individuals) (weighted)

Father Industry Group	Son Industry Group																		Row Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	475 (42)	142 (13)	106 (9)	193 (17)	16 (1)	94 (8)	0 (0)	7 (1)	14 (1)	2 (0)	9 (1)	1 (0)	7 (1)	9 (1)	10 (1)	19 (2)	17 (2)	0 (0)	1121
2	27 (1)	1297 (66)	123 (6)	256 (13)	20 (1)	94 (5)	0 (0)	13 (1)	19 (1)	2 (0)	9 (0)	11 (1)	17 (1)	12 (1)	22 (1)	14 (1)	26 (1)	1 (0)	1963
3	10 (1)	124 (16)	401 (52)	120 (15)	10 (1)	26 (3)	0 (0)	7 (1)	1 (0)	0 (0)	2 (0)	3 (0)	18 (2)	4 (1)	4 (1)	30 (4)	15 (2)	1 (0)	777
4	47 (2)	309 (14)	118 (5)	1566 (69)	20 (1)	76 (3)	2 (0)	22 (1)	14 (1)	0 (0)	17 (1)	8 (0)	21 (1)	4 (0)	15 (1)	16 (1)	11 (0)	2 (0)	2269
5	6 (2)	40 (13)	22 (7)	48 (16)	152 (50)	16 (5)	0 (0)	3 (1)	0 (0)	0 (0)	3 (1)	0 (0)	6 (2)	3 (1)	1 (0)	2 (1)	1 (0)	0 (0)	304
6	10 (1)	121 (17)	87 (13)	171 (25)	27 (4)	186 (27)	0 (0)	17 (2)	10 (1)	5 (1)	1 (0)	4 (1)	12 (2)	0 (0)	21 (3)	1 (0)	18 (3)	5 (1)	694
7	0 (0)	1 (28)	0 (0)	1 (28)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (29)	0 (0)	1 (15)	0 (0)	0 (0)	0 (0)	5
8	3 (4)	16 (20)	2 (3)	14 (17)	0 (0)	9 (11)	0 (0)	9 (11)	5 (7)	0 (0)	0 (0)	1 (1)	10 (12)	0 (0)	9 (11)	1 (2)	1 (2)	0 (0)	80
9	0 (0)	7 (13)	1 (3)	20 (35)	2 (3)	3 (5)	0 (0)	2 (4)	10 (17)	0 (0)	0 (0)	3 (6)	4 (7)	0 (1)	1 (1)	0 (1)	0 (0)	2 (4)	55
10	0 (0)	2 (33)	0 (0)	1 (11)	0 (0)	0 (0)	0 (0)	0 (0)	1 (26)	0 (3)	0 (0)	1 (20)	0 (0)	0 (4)	0 (0)	0 (3)	0 (0)	0 (0)	5
11	0 (0)	14 (21)	1 (2)	15 (21)	3 (4)	4 (6)	0 (0)	0 (0)	8 (11)	2 (3)	15 (22)	3 (4)	1 (1)	0 (0)	4 (6)	0 (0)	0 (0)	0 (0)	69
12	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	9 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	9
13	2 (2)	24 (22)	5 (4)	27 (25)	0 (0)	2 (2)	0 (0)	3 (2)	8 (7)	0 (0)	0 (0)	3 (3)	25 (23)	6 (5)	2 (2)	0 (0)	2 (2)	0 (0)	108
14	21 (4)	76 (16)	37 (8)	88 (19)	7 (2)	60 (13)	2 (0)	21 (4)	14 (3)	0 (0)	1 (0)	11 (2)	23 (5)	63 (13)	23 (5)	9 (2)	11 (2)	4 (1)	471
15	8 (4)	45 (24)	3 (2)	36 (19)	6 (3)	4 (2)	0 (0)	12 (7)	2 (1)	1 (1)	0 (0)	5 (3)	2 (1)	7 (4)	34 (18)	0 (0)	21 (11)	0 (0)	186
16	1 (1)	9 (10)	12 (14)	26 (30)	6 (7)	6 (7)	0 (0)	2 (3)	0 (0)	0 (0)	0 (0)	1 (1)	4 (5)	2 (2)	7 (8)	10 (11)	1 (1)	0 (0)	86
17	0 (0)	41 (13)	12 (4)	60 (19)	4 (1)	30 (10)	0 (0)	1 (0)	5 (1)	0 (0)	1 (0)	0 (0)	8 (2)	1 (0)	3 (1)	0 (0)	144 (46)	0 (0)	312
18	1 (1)	18 (24)	15 (21)	9 (13)	1 (1)	13 (17)	0 (0)	3 (4)	2 (2)	0 (0)	0 (0)	5 (7)	0 (0)	3 (2)	0 (0)	1 (1)	1 (1)	2 (3)	73
Total	611	2287	945	2651	274	622	4	121	112	13	58	68	158	114	157	103	269	19	8586

1-Agriculture, 2-manufacturing, 3-Construction, 4-Wholesale and Retail Trade, 5- Hotel and Restaurant, 6- Transport and Storage, 7- Travel, 8-Post and Telecommunication, 9- Financial Services, 10-Insurance and Pension, 11-Real Estate and Renting, 12- Computer and Related Activities, 13- Other Business Services, 14- Public Administration and Defense, 15- Education, 16- Health and Social Work, 17- Other Community, Social and Personal Services, 18- Other Services

Source: Author's calculations based on NSSO Employment Unemployment Survey-61st Round
(Figures in the parenthesis show percentage values)



Mobility across Principal Industry Groups: 66th Round (2009-10) (Number of individuals) (weighted)

Father Industry Group	Son Industry Group																		Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	424 (55)	64 (8)	83 (11)	90 (12)	8 (1)	49 (6)	0 (0)	2 (0)	6 (1)	1 (0)	3 (0)	0 (0)	15 (2)	3 (0)	18 (2)	3 (0)	3 (0)	0 (0)	772
2	13 (1)	966 (65)	85 (6)	164 (11)	14 (1)	35 (2)	3 (0)	32 (2)	18 (1)	1 (0)	2 (0)	50 (3)	40 (3)	11 (1)	25 (2)	15 (1)	10 (1)	2 (0)	1487
3	5 (1)	99 (11)	540 (60)	98 (11)	13 (1)	49 (5)	0 (0)	15 (2)	3 (0)	1 (0)	3 (0)	5 (1)	12 (1)	9 (1)	5 (1)	36 (4)	7 (1)	0 (0)	899
4	14 (1)	207 (10)	92 (5)	1458 (72)	17 (1)	75 (4)	0 (0)	20 (1)	26 (1)	6 (0)	3 (0)	22 (1)	25 (1)	11 (1)	24 (1)	9 (0)	9 (0)	1 (0)	2021
5	2 (1)	12 (5)	36 (16)	41 (19)	114 (52)	3 (1)	1 (1)	1 (1)	2 (1)	0 (0)	0 (0)	3 (1)	1 (0)	0 (0)	1 (1)	0 (0)	0 (0)	3 (1)	220
6	9 (1)	108 (17)	82 (13)	105 (17)	33 (5)	201 (32)	3 (1)	12 (2)	16 (3)	4 (1)	9 (1)	8 (1)	16 (3)	3 (0)	16 (3)	3 (0)	4 (1)	1 (0)	633
7	0 (0)	2 (13)	0 (0)	3 (21)	0 (0)	0 (0)	5 (29)	0 (0)	3 (21)	0 (0)	0 (0)	3 (16)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	16
8	0 (1)	11 (22)	1 (1)	7 (14)	1 (2)	2 (3)	0 (0)	6 (12)	5 (11)	0 (0)	0 (0)	4 (9)	0 (0)	0 (0)	11 (24)	0 (0)	0 (1)	0 (0)	48
9	0 (0)	8 (11)	6 (8)	12 (16)	3 (4)	1 (1)	0 (0)	0 (0)	26 (34)	0 (0)	0 (0)	3 (15)	3 (4)	1 (1)	3 (5)	0 (0)	1 (1)	0 (0)	76
10	0 (0)	2 (20)	0 (1)	3 (40)	0 (0)	0 (0)	0 (0)	0 (0)	0 (1)	0 (3)	0 (0)	3 (33)	0 (0)	0 (0)	0 (1)	0 (0)	0 (0)	0 (0)	8
11	0 (0)	6 (11)	4 (7)	16 (30)	0 (0)	2 (3)	1 (2)	0 (1)	1 (1)	0 (0)	22 (41)	0 (0)	0 (0)	0 (0)	1 (3)	0 (1)	0 (0)	0 (0)	54
12	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4
13	1 (1)	27 (22)	11 (9)	16 (14)	2 (2)	2 (2)	0 (0)	5 (4)	1 (1)	0 (0)	0 (0)	14 (12)	34 (28)	3 (2)	2 (2)	2 (1)	0 (0)	1 (1)	121
14	9 (2)	72 (14)	44 (9)	98 (19)	19 (4)	57 (11)	1 (0)	4 (1)	22 (4)	1 (0)	1 (0)	34 (7)	15 (3)	57 (11)	19 (4)	16 (3)	24 (5)	15 (3)	507
15	3 (2)	9 (8)	16 (14)	24 (20)	0 (0)	2 (2)	0 (0)	3 (3)	8 (7)	0 (0)	0 (0)	2 (2)	0 (0)	8 (6)	31 (27)	8 (7)	2 (2)	0 (0)	117
16	0 (0)	25 (47)	2 (4)	6 (11)	1 (2)	1 (2)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	1 (3)	1 (1)	1 (2)	1 (2)	18 (18)	3 (5)	0 (0)	53
17	1 (0)	27 (11)	20 (8)	30 (12)	0 (0)	3 (1)	0 (0)	3 (1)	0 (0)	7 (3)	0 (0)	4 (2)	12 (5)	0 (0)	2 (1)	3 (1)	145 (57)	0 (0)	255
18	0 (0)	9 (17)	12 (22)	6 (12)	7 (13)	10 (19)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (3)	0 (0)	0 (0)	6 (11)	53
Total	481	1652	1034	2179	231	492	15	106	137	22	43	168	174	106	163	105	208	29	7345

1-Agriculture, 2-manufacturing, 3-Construction, 4-Wholesale and Retail Trade, 5- Hotel and Restaurant, 6- Transport and Storage, 7- Travel, 8- Post and Telecommunication, 9- Financial Services, 10-Insurance and Pension, 11-Real Estate and Renting, 12- Computer and Related Activities, 13- Other Business Services, 14- Public Administration and Defense, 15- Education, 16- Health and Social Work, 17- Other Community, Social and Personal Services, 18- Other Services

Source: Author's calculations based on NSSO Employment Unemployment Survey-66th Round
(Figures in the parenthesis show percentage values)



Mobility across Principal Industry Groups: 68th Round (2011-12) (Number of individuals) (weighted)

Father Industry Group	Son Industry Group																		Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	395 (52)	86 (11)	65 (9)	73 (10)	14 (2)	48 (6)	0 (0)	7 (1)	4 (1)	5 (1)	5 (1)	3 (0)	19 (2)	7 (1)	14 (2)	5 (1)	7 (1)	2 (0)	757 (11)
2	13 (1)	1075 (67)	78 (5)	153 (10)	9 (1)	45 (3)	8 (1)	21 (1)	26 (2)	16 (1)	13 (1)	48 (3)	36 (2)	8 (1)	25 (2)	4 (0)	13 (1)	4 (0)	1593 (23)
3	7 (1)	119 (16)	431 (58)	69 (9)	12 (2)	40 (5)	0 (0)	5 (1)	1 (0)	0 (0)	2 (0)	13 (2)	16 (2)	5 (1)	5 (1)	10 (1)	13 (2)	0 (0)	748 (11)
4	11 (1)	219 (13)	73 (4)	1068 (63)	26 (2)	68 (4)	0 (0)	19 (1)	25 (1)	11 (1)	8 (0)	25 (1)	74 (4)	4 (0)	22 (1)	12 (1)	16 (1)	12 (1)	1694 (24)
5	2 (1)	39 (16)	14 (6)	31 (13)	98 (42)	16 (7)	0 (0)	0 (0)	4 (2)	0 (0)	2 (1)	8 (4)	4 (2)	4 (2)	3 (1)	2 (1)	8 (4)	0 (0)	235 (3)
6	7 (1)	103 (15)	66 (10)	132 (20)	10 (2)	177 (26)	6 (1)	16 (2)	9 (1)	15 (2)	3 (0)	5 (1)	61 (9)	2 (0)	15 (2)	8 (1)	22 (3)	15 (2)	673 (10)
7	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (13)	0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	2 (27)	0 (0)	0 (0)	3 (51)	0 (0)	0 (0)	6 (0)
8	1 (2)	3 (8)	1 (2)	9 (24)	1 (2)	3 (9)	0 (0)	2 (6)	2 (6)	0 (0)	0 (0)	4 (12)	4 (10)	0 (0)	2 (4)	2 (7)	3 (9)	0 (0)	37 (1)
9	0 (0)	10 (15)	1 (1)	6 (9)	4 (5)	8 (11)	3 (5)	0 (0)	7 (10)	0 (0)	1 (2)	11 (16)	7 (9)	1 (2)	4 (6)	6 (9)	0 (0)	0 (0)	70 (1)
10	0 (0)	1 (9)	0 (0)	1 (22)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (3)	0 (0)	4 (62)	0 (0)	6 (0)
11	0 (0)	12 (15)	0 (0)	6 (7)	2 (2)	6 (7)	0 (0)	0 (0)	1 (1)	0 (0)	39 (46)	0 (0)	7 (9)	0 (0)	0 (0)	6 (7)	4 (5)	0 (0)	85 (1)
12	0 (0)	0 (0)	0 (0)	2 (87)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (0)
13	4 (1)	48 (14)	16 (5)	58 (17)	6 (2)	10 (3)	0 (0)	2 (1)	21 (6)	6 (2)	5 (1)	17 (5)	112 (33)	5 (1)	21 (6)	9 (3)	3 (1)	0 (0)	342 (5)
14	3 (1)	29 (10)	27 (10)	48 (17)	4 (1)	23 (8)	0 (0)	11 (4)	19 (7)	6 (2)	1 (0)	10 (4)	21 (8)	40 (14)	28 (10)	7 (2)	3 (1)	1 (0)	281 (4)
15	2 (2)	13 (12)	4 (3)	15 (14)	2 (2)	5 (5)	1 (1)	12 (11)	6 (5)	0 (0)	0 (0)	19 (18)	9 (9)	0 (0)	17 (15)	2 (2)	0 (0)	2 (2)	108 (2)
16	0 (0)	22 (26)	1 (1)	12 (14)	4 (5)	4 (5)	0 (0)	2 (3)	1 (1)	1 (1)	0 (0)	1 (1)	13 (16)	1 (1)	1 (1)	20 (24)	1 (1)	0 (0)	85 (1)
17	4 (2)	20 (10)	26 (13)	24 (12)	2 (1)	12 (6)	0 (0)	0 (0)	8 (4)	0 (0)	0 (0)	8 (4)	7 (3)	4 (2)	5 (2)	0 (0)	76 (39)	1 (0)	197 (3)
18	0 (0)	4 (7)	2 (4)	22 (36)	0 (0)	4 (6)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	7 (11)	4 (7)	2 (3)	0 (0)	5 (8)	9 (15)	62 (1)
Total	448 (6)	1802 (26)	804 (12)	1729 (25)	193 (3)	469 (7)	19 (0)	98 (1)	133 (2)	61 (1)	80 (1)	175 (3)	399 (6)	86 (1)	163 (2)	98 (1)	177 (3)	46 (1)	6980

1-Agriculture, 2-manufacturing, 3-Construction, 4-Wholesale and Retail Trade, 5- Hotel and Restaurant, 6- Transport and Storage, 7- Travel, 8-Post and Telecommunication, 9- Financial Services, 10-Insurance and Pension, 11-Real Estate and Renting, 12- Computer and Related Activities, 13- Other Business Services, 14- Public Administration and Defence, 15- Education, 16- Health and Social Work, 17- Other Community, Social and Personal Services, 18- Other Services

Source: Author's calculations based on NSSO Employment Unemployment Survey-68th Round
 (Figures in the parenthesis of each row show percentage of sons engaged in various industries for each of father's category)
 (Figures in the parenthesis of the last column depicts the percentage of fathers belonging to different industries)




OBSERVATIONS AT A GLANCE:

- The service sectors with greater share in total services export
 - Computer and Information Services (42%)
 - Other Business Services (20%)
 - Travel (12%)
 - Transport (11%)
- The degree of persistence remains high for the entire period of study.
- The sectors where the sons have primarily moved in
 - Manufacturing
 - Wholesale and retail trade sector
 - Transport
 - Construction



INTUITIVE EXPLANATION:

- Jobs in the Computer and Information Services sector are
 - Knowledge-intensive → less employment generating
 - Involves Flexible but long working hours
 - Generates scope of employment in other manufacturing and non-traded services sectors , may be in informal manufacturing/services
 - For Travel, benefits of export growth are spread over a number of other non-tradable services as well as goods sectors.
 - Travel comprises of lodging, food and beverages, entertainment, and transportation consumed by the foreigners within the economy visited.
 - Gifts, souvenirs, and articles purchased for travelers' own uses and taken out of the economies visited.
- 

CONCLUSION:

- Persistence is observed in intergenerational job choice.
- The estimation result shows that
 - Father's occupation and status has significant positive impact on son's probability of persistence
 - Higher level of education and **export performance of service sectors reduce the degree of persistence**
- The impact of services trade liberalization in terms of employment generation is spread over a number of other services sectors through backward and forward linkages including manufacturing sector.



Thank You

