



History of PIDE Series-5

A REVIEW OF THE LABOUR MARKET Research at PIDE – 1957–2009

Muhammad Irfan





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**A Review of the Labour Market
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1957-2009**

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**PAKISTAN INSTITUTE OF DEVELOPMENT ECONOMICS,
ISLAMABAD**

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INTRODUCTION

Pakistan Institute of Development Economics (PIDE) since its inception in the mid-fifties has been promoting cutting edge socio-economic research bearing upon critical developmental issues. This research work was disseminated through articles in the Pakistan Development Review (PDR) and PIDE research reports. In the area of labour market research specifically the contribution and assistance of international organisations in undertaking joint research activities and in providing technical and financial support has to be acknowledged. Prominent among these were the International Labour Organisation (ILO), in particular its regional centre, the erstwhile Asian Regional Team for Employment Promotion (ARTEP), and the World Bank. The support of the Netherlands Government boosted both the quantum, and quality of research activities at PIDE.

Labour market, best defined as a set of institutions which mediate between macro-policies and their micro outcome, occupies the centre stage in the development process of an economy. The allocative and distributive impact of the labour market is influenced by both sides of the market—demand and supply. The former is reflective of GDP growth and its sectoral composition while the latter is an interactive outcome of the varying size of the population and participation patterns of its various age / sex cohorts in the production process. A host of other factors, both internal, in particular the strength of functioning of the labour market institutions, as well as external factors such as foreign aid climate, and emigration also come into play.

Pakistan's varying growth performance over the last six decades has been associated with a variety of labour market outcomes, some of which were investigated and analysed by PIDE researchers. In particular, the labour use and worker wages generated by the different development approaches and the associated policy packages were the subjects of analysis. For instance, the impact on the labour market of the Import Substitution Strategy (ISI) to support industrialisation,

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during the first two decades, was critically assessed by the PIDE researchers. Similarly, a number of studies focused upon the effects of expansion of the public sector and nationalisation of banks and industries as well as pro-labour policies during the 1970s. The studies also subjected to investigation the influence of the policy changes, such as trade liberalisation, privatisation of the public sector corporations, the opening up of the economy and the IMF/WB stabilisation reform packages, since the late 1980s.

It may be added that inferences regarding the expected outcomes of the economic policies are filtered through the very conceptualisation of the labour market. During the fifties, Lewis (1954) suggested the “Dualistic Labour” market model wherein labour supply was assumed to be elastic to the formal or industrial sector while the surplus labour resided in an undifferentiated residual—agriculture and the informal sectors. Fei and Ranis in a PDR article [1961] “Unlimited Supply of Labour and Concept of Balanced Growth” argued that the Lewis approach, because of its de-emphasis on agriculture, was somewhat flawed whereas the onset of the turning point was a distant phenomenon. Islam (1965) in his review dilated upon these themes and provided additional insights, while Mellor (1991) viewed agricultural development as an initiator rather than a sustainer as envisaged by the Lewis model. The dominant mode of development thinking, that has been in vogue till recently, i.e., the so-called “Washington Consensus”, with its emphasis on liberalisation, privatisation and deregulation to foster globalisation and competition together with a competitive labour market, is being seriously challenged in the wake of the global economic crises and financial melt down. Prominent among its critics has been the ILO.

PIDE Studies

The studies at PIDE while investigating the labour market outcomes have been attentive to the implications of the dualistic and the neo-classical models. Developments such as emigration, remittance inflows, IMF/WB structural adjustment packages and rising unemployment have expanded the canvass of the researchers. The research work aimed at investigation of trade-employment linkages as well as the likely impact of labour mobility, labour migration and remittances on the economy and the society, especially on poverty levels.

A chronological sequencing of articles and research reports related to labour market is provided below in Table 1.

Table 1

Labour Market Studies – 1959-2008

(Numbers by Topics)

Topics \ Years		1959-60	1961-70	1971-80	1981-90	1991-2000	2001-2008	Total
1	Labour Force							
	Participation	0	4	4	9	9	5	31
2	Employment	1	7	12	19	20	11	70
3	Informal Sector	0	0	0	3	4	0	7
4	Unemployment	0	0	1	6	2	2	11
5	Wages	0	6	6	4	13	7	36
6	Migration and							
	Emigration	0	1	5	17	15	1	39
7	Remittances	0	2	0	2	3	2	9
		1	20	28	60	67	28	206

Source: PDR Articles and Research Reports.

This report briefly describes the body of knowledge concerning the labour market that was generated and disseminated by PIDE over the years since the institutes inception. The analysis is organised in different sections namely: labour force participation, employment structure, informal sector, unemployment, wages, migration and emigration as well as remittances. It may be added that though the studies discussed are confined mainly to the work at PIDE, work by non-PIDE researchers has also been discussed. However research output of PIDE scholars published elsewhere is not a part of this review.

1. LABOUR FORCE PARTICIPATION

Labour force both in quantitative as well as qualitative dimensions is an important barometer of the productive potential of the economy. Labour force participation behaviour of the individuals and families, therefore, is of paramount importance in discerning the inter-linkages between the demographic base of an economy and the size of the labour force. PIDE research focusing on demographic changes has been discussed in a separate volume [History of PIDE Series No.4]. The focus of this section is on labour market participation including the demographic component, age, sex and other characteristics of the individuals.

Paucity of data constrained the researchers to confine themselves to only aggregative level analysis through Population Censuses data. It was not until 1963, when the Labour Force Surveys by the Federal Bureau of Statistic (FBS) became available more or less on an annual basis. Besides data constraints, the conceptual ambiguities underpinning the notion of work and labour force participation, arising out of lack of correspondence between the economic realities of the developing world and the standard labour force approach (to quantify employment, unemployment and the labour force participation) further complicated the task of researchers. Research studies at PIDE identified these problems and highlighted the associated imprecision in the estimates, in particular of female labour force participation, which, it was concluded, was hard to quantify with precision. Surveys conducted at the same time covering the same households yielded different results on female labour force participation because of different measures of the female work participation. [Irfan, *et al.* (1983)].

An important finding was that the Census underestimated the activity rates particularly of the female population. This appears to be a major conclusion of different studies because of the use of the usual status approach with reference period of one year rather than the current status approach with reference period of the preceding week as in Labour Force Surveys. Research studies in the initial phases, used the Population Censuses data. Labour market participation since the turn of the 20th century was investigated [Farooq (1968)]. The major conclusion was that the declining labour force participation at the aggregate level during 1901-1951 was due to higher level of population growth because of high fertility and declining mortality; the associated age structure effect restrained the growth in labour force relative to population. The economic depression of the 1920s and political struggle for independence during this period also led to the decline in labour force participation rates. The reversal of this trend during 1951-61 was attributed to changes in the labour force concept, wherein by 1961 the unpaid family helpers were began to be included in the labour force in contrast to the 1951 census where they were not part of the labour force, resulting in a statistical artefact [Bean (1966)]. Inter-district variations in the labour force participation of male and female were analysed, in cross-sectional studies using the Census data, and were found to be associated with the level of schooling and the job structure of the district.

Male activity rates, having a curvilinear relationship with age, were found to be influenced by literacy and education at the district level and rural to urban migration [Yusuf (1969)]. Utilising household level data, non-labour income, remittances and extensive job search by the educated have been identified as explanatory variables for the delay in the entry into labour force which yielded a lower participation level than other developing countries [Kozel and Alderman (1990)].

Female Labour Force Participation

Studies undertaken by PIDE focused on the determinants of female work participation. Indicators of wealth and ownership of agricultural land had a negative influence while economic pressures exerted a positive influence on female work participation [Nasra (1975)]. Heterogeneity among the female labour market participants has been highlighted by a number of studies, suggesting a bimodal distribution. Females in large numbers are engaged in low-paid low-skilled jobs due to poverty and economic pressures while the few equipped with better education lie at the top of the skill ladder [Naqvi (2002)]. Application of Becker's time allocation model to females in rural areas indicated that home time allocation of labour market participating females is significantly different and higher than the non-participants [Sultana (1994)]. Socio-economic conditions of different households have a bearing on both the productive and reproductive choices of the family. Females from higher income households marrying late participate in the labour market with better status occupations, alluding to the stratification along the income ladder [Sathar (1989)].

Child Labour

Child labour, an important variable which reflects the interactive effect of socio-economic conditions of the families and the prevailing labour laws and their implementation, is not adequately quantified by the labour force surveys wherein the age of entry is at 10 years, excluding those belonging to age cohort of 5-9 which could be substantial as revealed by the Child Labour Survey of (1996). Research exercises utilising these data sources indicate that on the supply side factors such as age and gender are important which influence child work participation. Incidence of child work was found to be higher in rural areas particularly in agriculture, and in services in the urban areas

[Jafri (1997)]. Given that the parental characteristic, particularly income of the household, plays an important role in schooling-work decisions of the child, a study questioned the advisability of the Employment Act and other such legislation, which prohibit child work, in view of the market failure, particularly in education, where the poor do not enjoy access to credit [Burki (1998)]. The implications of subsidising education, using a three-sector general equilibrium framework were assessed by a study which suggested that that may not result in decline in child labour. [Sarbjit (2004)].

2. EMPLOYMENT STRUCTURE

The transformation of the economy in the process of economic growth, in accordance with Fisher/Clark hypothesis, is accompanied by a progressive reallocation of labour from primary to secondary and tertiary sectors of the economy [Clark (1975)]. Pakistan's experience of changes in the employment structure for the period 1961-72 was found to be slightly different than the Chenery and Syrquine (1975) international cross sectional study [Irfan (1981)]. A regression of sectoral employment shares on per capita GDP for 1961-72 yielded the elasticity coefficients of -0.11 for agriculture and 0.61 for manufacturing which were greater in magnitude than Chenery's estimate. This could be, as argued by the author, due to Pakistan's position at the lower end of Chenery's sample.

Over the years the employment share of agriculture has declined but still it accounts for over two-fifths of the work force in 2007-08 while the services sector has acquired prominence, in particular since 1990, absorbing more than half of the labour force. PIDE research exercises investigated the labour absorptive capacities of different sectors of the economy by focusing on the questions of factor proportions and their efficient use, particularly in the large scale manufacturing, and in relation to mechanisation in the agriculture sector.

Agriculture: Growth, Technological Choices and Employment

Pakistan was a predominantly agrarian economy at the time of independence. Since then the agriculture sector has experienced a number of positive developments. Construction of dams, barrages and irrigation channels along with massive introduction of tube wells enhanced the availability of water which resulted in the expansion of

the irrigated area. The seed-based technological breakthrough of the Green Revolution led to a quantum jump in farm productivity and growth potential of agriculture. These positive developments took place in the face of skewed land distribution despite attempts at land reforms in the 1960s and 1970s. Also the policy regime of under pricing capital during the first two decades and extension of input subsidies had its impact on the choice of technology and hence on employment.

PIDE research focused on the effects of these changes both theoretically and empirically. Questions regarding technological changes were discussed and a lively debate raged on the issue of tractorisation. Similarly the relationship of farm size to productivity was explored. The dispersal of developmental benefits in a broader framework including the role of institutions, and land size distribution were also assessed by PIDE studies.

Tractorisation Debate

A pioneering study [Azam (1959)] put forward the view that Pakistan's agriculture being low in productivity levels needed technological improvement, though it was not clear whether the economy could accommodate the technical advances that in the short run could be labour displacing. That the social costs of tractorisation outweigh the social benefits was attributable to biased policies, in particular to undervaluation of foreign exchange, was concluded by Bose and Clark (1969). The welfare effects of tractorisation were analysed in a review article [Warer and Jaysuria (1986)] which concluded that assuming distortion free market prices of inputs and outputs and ignoring the income distribution effects there exists a possibility that social returns from mechanisation could exceed the private returns.

The empiricism in the debate remains rather controversial. That tractorisation may not be labour displacing but employment generating has also been concluded by some research studies, particularly those conducted during the 1960s and 1970s, wherein mechanisation has been seen as instrumental to the reduction of the cost of tillage [Choudhry (1969)]. A major study [Qureshi and Ghani (1989)] concluded that technological and institutional changes in agriculture had an inconsistent effect on employment and the totality of the impact of technology has been mixed in terms of being labour-saving or labour-augmenting.

The majority of the studies, however, were of the view that the interactive effect of the unequal land size distribution and the policy regime of underestimating the cost of capital actively encouraged mechanisation, thereby curtailing optimal labour use as well as exerting pressure on the owners to enlarge their operational holdings [Salam (1977)]. In this context the technical efficiency of farm size, an important variable to influence factor mix, was investigated in a study focusing on irrigated area [Burki and Nawaz (1998)]. They found that small farms were found to be more efficient than the larger ones because of the intensive use of labour including family labour. A study on Haryana, India, found widespread allocative inefficiency on both the sharecropping and owner-operated farms which was non-existing in case of voluntary sharecropping [Bagi (1981)].

Distributive Justice

Pakistan has followed a bimodal strategy of agriculture development wherein access to subsidised inputs has been unequal. Generated by a biased public policy regime, this is essentially a transfer from the weak to the strong. Large farms became more efficient because of greater input per unit of land and the operation of increasing returns to scale. In addition, landlords, by changing the rental share in their favour, also captured the gains of the modern technology [Khan (1986)].

Rural Non-Farm Sector

A host of factors underlie the phenomenal growth of the rural non-farm sector in Pakistan. The agricultural transition in Pakistan being characterised by a declining labour use per unit of land—possibly due to mechanisation, growing population pressures because of high fertility and the public provisioning of public services such as education and health—has led to the growth of rural non-farm employment. Given the declining share of agricultural employment, rural non-farm employment emerged as an important area to be analysed, though it should be borne in mind that a close inter-linkage between farm and non-farm sectors defy a clear delineation.

Major determinants for off-farm work participation, according to a study, were found to be the level of education and infrastructure development of the area such as farm to market roads and electrification [Jamal (1995)]. Non-farm enterprises in rural areas as

well as in adjoining small urban centres contribute towards providing livelihood to a large fraction of the rural population. Predominantly a family-based enterprise system, the rural non-farm sector is characterised by self-employment in trading, while wage employment is found in construction and transport. The labour market exhibits a fair amount of heterogeneity, with most of the informal sector operators being equipped with modest resources to generate wage employment [Arif, *et al.* (2000)]. The study therefore suggested the need to establish rural industries to generate new employment opportunities. A study [Chaudhry (1981)] emphasised that the institutional approach to rural development will have limited impact on the rural scene without controlling misgovernance.

Employment in Large Scale Manufacturing

Starting at independence with an almost non-existing base, rapid industrial development has been a major policy objective pursued under the import substitution strategy. Initially confined to consumer goods industries, it was later extended to intermediate and capital goods industries. Governmental support policies over most of the period have been confined to large scale manufacturing with little regard to capital intensity in the context of a labour surplus economy. Pakistan, however, initiated the dismantling of tariff walls from the late 1980s. Privatisation of public sector corporations and march towards openness of the economy has been followed since the 1990s during which the IMF/WB Stabilisation and Structural Adjustment programmes were also adopted.

PIDE studies investigated the impact of these policy changes on labour use. Thus the question of factor proportions and technological choices, particularly during 1950-70 period, were explored. The effects of governmental disinvestment and privatisation on labour market variables were assessed. Trade-labour linkages were scrutinised to unravel the nexus between globalisation and employment in the manufacturing sector.

A study, while estimating the capital-labour ratio in twenty manufacturing sectors, separately for large and small sectors, found that factor intensities had not been consistent with the country's factor endowment, leading to a great deal of wasteful use of capital [Khan (1970)]. Another attempt to measure technical change, technical efficiency, and productivity found that technical change was labour

saving and capital using [Ali and Hamid (1996)]. A study covering Pakistan's experience of the 1950s and 1960s assessed the role of both the market and non-market forces in shaping labour market outcomes. The latter included the extent of labour unionisation, and minimum wage legislation. The study also looked into the inter-linkages between the changing average product in agriculture which influences both the supply and demand for industrial labour. In a simultaneous equation framework, growth in employment, wages, and unionisation in large scale manufacturing were explained endogenously. The study found that rising average productivity in agriculture has a positive effect on wage changes and negative effect on employment in the large scale manufacturing, suggesting that growth in agriculture acts as a competing source of demand for labour. The endogenous explanation of unionisation identified the importance of manufacturing, employment growth and wage legislation. Minimum wage legislation had a positive effect on wages and unionisation but negative influence on employment in large scale manufacturing [Irfan (1982)].

Stabilisation and Structural Adjustment

The impact of privatisation of firms in the edible oil and cement industry were found to be having a negative influence on employment [Khan (2003)]. Also a study showed that income inequality had increased as a consequence of the Stabilisation and Structural Adjustment (SSA) programmes followed during 1987-92 because of declining employment and a regressive tax structure [Kemal (1994)].

Trade Liberalisation

Studies focusing on trade viewed that growth of manufactured exports of developing countries was reflective of their factor endowments in terms of the use of surplus labour and limited capital [Kruger (1981)]. The effects of exports promotion efforts and policies by Pakistan on analysis were found to be pro-employment [Ashfaq (1991)]. Similarly in a study [Yasmin and Khan (2005)] looking into the trade-labour linkages obtained standard trade theocratic results i.e., a shift from capital intensive to labour intensive production.

Some other studies investigated the impact of the openness of the economy on employment in large scale manufacturing. Utilising the LSM data for 1970-96 through an econometric exercise it was found that when trade is used as a measure of openness, it has a positive and

significant effect on employment but when import duties are used as a measure, the conclusions get reversed [Yasmin and Khan (2005)]. Another study viewed that during the period 1990-2000, the share of employment in low wage industries such as textiles increased wherein the share of production workers had also risen while that of the non-production workers had declined, suggesting that the performance of the export sector such as textiles was based on employment of unskilled or semiskilled labour, that though registered an increase, was associated with real wage curtailment [Irfan (2009)].

Informal Sector

There is paucity of data on the urban informal sector which PIDE surveyed for its studies. Given that the informal sector is large enough accounting for three fourths of the total urban employment, it has the potential to create ample work opportunities in urban areas. Its growth, however, is attributable to non-intervention by government [Kamal and Mahmood (1998)]. Furthermore, the major constraining factor in the context of informal sector expansion was identified as the lack of demand for the goods produced by informal operators because of their poor quality. In order to improve the productivity in the informal sector, higher level of investment, in both physical and human capital, was needed [Sargana (1998)]. Micro-enterprises in the informal sector also impart training through the well known *ustaad shagird* system at no public cost [Burki (1991)].

The urban informal sector should not be treated as an undifferentiated homogeneous sector; rather, it is a coherent economic system having varying modes of production behaviour, factor use and factor rewards, as viewed by one author. The recognition of the importance is not accorded where the needed data and viable analytical framework are yet to be developed [Cohen and Havinga (1988)]. Not only data collection pertains to the unregistered population but the analysis has to reckon with the varying institutional influences. Non-compliance with labour laws and tax regulations, which can be regarded as a major source of comparative advantage to the informal sector despite its social costs, was examined by another study [Kazi (1989)]. Women engaged in home based activities are exploited, because of their restricted mobility which middlemen exploit as a source of cheap labour.

Manpower Projections

Manpower projections have been an integral part of the planning exercises right from the First Five Year Plan (1955-60). A number of international organisations such as the ILO, in particular for the Sixth Five Year Plan formulation, the Netherlands in the HED project, with other agencies also rendered assistance in this respect. PIDE's researchers have been routinely involved with the Planning Commission in the formulation of the various Five Year Plans, wherein elasticity coefficients for the plan period were used to estimate the labour demand and compared with the estimated labour supply to arrive at the unemployment level for the terminal year of the plan [Kemal (1994)].

Labour Force and Employment in Pakistan (1961-86) was presumably the first attempt to examine the magnitude and complexity of employment problem likely to be faced by Pakistan [Bose (1963)]. It may be noted that these projections roughly coincided with the then conceived Perspective Plan (1965-85). A major conclusion of the exercise was that the productive absorption of the incremental labour force would be an uphill task which needs to be carefully examined for employment objectives in the long term.

The Labour Force Matrix which allows one to have a variety of ways to identify an individual, such as by location, status, sector, occupation and education, constitutes a major improvement over the two-dimensional cross tabulations. It can be used for demand analysis and social system modelling [Cohen (1985)]. The author chose to simulate the Sixth Plan (1983-88) by means of a model to project demand and supply for the plan period and concluded that, on the whole, the plan did not predict major changes in the structure of the labour force, and pointed to the emergence of surpluses of higher skills and higher educational levels. Another exercise attempted to assess manpower projections for the period 1990-2003, to correspond with the period of the then Perspective Plan (1985-2000) [Herman and Irfan (1989)]. The authors admit the inadequacy of projections in general as they suffer from predictive errors in post fact evaluations because of data limitations and the nature of the exercises as shown in the use of this methodology elsewhere [see Amjad (1988) for comparison]. The exercise innovated on the demand side by distinguishing the demand for teachers based on the expected educational enrolment from the demand for the rest of the labour force. According to the projections, the overall unemployment level will rise from 5 percent in 1989 to 15

percent in the year 2003, in other words 40 percent of the incremental labour would not be productively absorbed during the projection period (1990-2003), with the highest unemployment rate being for the educated (22 percent) in 2003.

Working Conditions

A number of studies have been conducted to depict the working conditions of the workers utilising data generated from the specially mounted surveys. A survey conducted by PIDE in 1959 finds an inverse association between wage rate and absenteeism and shows that the small scale firms hire labour on a temporary basis on low wages [Khan (1963)]. Based on a pilot survey of 1986, in Karachi, Kazi and Sathar (1986) highlighted the bipolarity of the working conditions among female workers along the lines of socio-economic status. In a 1985 survey of poor earning women of Rawalpindi, Bilquees (1988) found that piece rated work is the dominant mode of earning of such workers. A focus on female headed households of the poorest strata, as viewed by the researcher, highlighted the disadvantaged position of women in the labour market with a high dependency burden.

Landlessness, which connotes poor working conditions, has been assessed differently in the research literature. A study defining landless labour as a person engaged in the farm sector without having any access to land, either as owner or as a tenant, suggested that the extrication of the landless from poverty may not be possible under the current productivity conditions and unequal land distribution [Irfan and Arif (1988)]. The importance of overall growth and the interlinkages between agriculture and non-agriculture growth have been highlighted by another study as generator of landlessness [Khan(1986)].

Labour market flexibility, meaning the freedom to hire and fire workers, which has been part of policy reforms under the IMF/WB structural reforms packages, has had its own deleterious effect on working conditions. Owing to the absence of protection there has been replacement of permanent and regular work by contract, part time and casual work as concluded by a study [Noriyuki and Ghayur (2002)]. The growing tendency towards informalisation and casualisation of wage employment in Pakistan since 1990 has been highlighted by another study [Irfan (2009)], underscoring the need to create an enabling environment for political as well as industrial democracy.

Unemployment and Underemployment

Youth and Educated Unemployment

Prevalence of high level of unemployment among the educated youth in Pakistan and in the developing world has posed amongst others the question of advisability of subsidising tertiary level of education. PIDE studies have addressed this issue both theoretically and empirically. In a modelling exercise, Chaudhry and Khan (1984) suggest that under certain conditions educational subsidies will increase the educated unemployment in the short run and are likely to lead to capital deepening in the long run.

A projection exercise on the supply/demand imbalances for educated youth using secondary data [Ghayur (1989)], found unemployment to be concentrated among matriculates and intermediates, though graduates were also in surplus. An empirical study focused upon the assessment of the magnitude and incidence of unemployment among the highly educated [Khan (1986)]. According to the author, an analysis of secondary data indicated that the bulk of the educated unemployed were less than thirty years of age pointing to the fact that the educated did eventually get employment but with a waiting period. This showed that there was marked discordance between the expectations of the unemployed and market demand.

An attempt was made to fit Phillips Curve on Pakistan's data [Hasan (1988)] for the period 1972-1984. The evidence supports the existence of a short-run Phillips curve. Interestingly, there existed a long run trade off between excess demand for labour and inflation despite incorporating inflationary expectations. The author attributed this result to labour market rigidity on account of long term wage contracts.

Underemployment

Underemployment in Pakistan was assessed directly as those working less than 35 hours per week and indirectly through the use of productivity estimates [Robinson and Abbasi (1979)]. The study concluded that underemployment is mostly concentrated in family organised production units in agriculture, trade and services. The author viewed this as the essence of work sharing which is based on familial income sharing, but cautioned that there was a limit to such intensification.

3. POPULATION MOBILITY—MIGRATION AND EMIGRATION

Pakistan has witnessed various kinds of labour mobility—both cross border as well as internal migratory streams each having its own set of effects on the economy depending upon the permanence, process of settlement, and the conditions of the economy [Arif and Irfan (1997)]. Numerous research studies at PIDE looked into these movements.

Internal Migration

The phenomenon of migration cannot be easily explained and understood without considering the economic, social and demographic forces which generate these movements. Therefore studies theorising about migration must reckon with these aspects. There are however certain problems in the formulation of a general theory of migration, the formidable being adequate conceptualization. Haque (1974) while suggesting different approaches to study migration asserts that it has to be explored through a multi-disciplinary apparatus; that the study of migration is not the monopoly of any single discipline.

Another exercise utilising Harris-Todaro framework examines the role of institutions, wherein the role of the three agents—the landlords, the landless and rural money lender—is assessed [Chaudhry (1982)]. The model predicts that without reckoning with the consumption loans extended by money lenders, effectiveness of the policy instruments cannot be precisely understood. Money lenders siphon off the gains supposed to accrue to the agriculture labour thereby lowering the effective wages.

Internal migration has been subjected to a good deal of investigation focusing on broad patterns such as inter-provincial, inter-district and rural to urban migration using population censuses, labour force surveys, and other data collection ventures to examine and understand the socio-economic determinants and consequences of internal migration. The volume and pattern of net inter-provincial migration have been examined for 1971-81 using census survival method [Perveen (1993)]. In case of Sindh, Khyber Pakhtunkhwa, Balochistan and Islamabad city which gained in population during 1981-98, the volume of internal migration was estimated using the 1998 Census data by Karim (2003).

Migration is found to be age selective and it mostly occurs in areas where job opportunities and other facilities are available. Using regression analysis a study [Barklay (1991)] looked into the determinants of inter-district mobility for the 1971-81 period. The study found that migration was responsive to urbanisation, population density and literacy rates. Over time a relationship between past and present migration was attributed to the reduction in the social and psychological costs.

High levels of education and the nature of infrastructure were also found relevant explanatory variables for migration. On the basis of Population Labour Force and Migration (PLM) 1979 survey migration patterns were assessed, with the major conclusion that internal migration is taking place increasingly over long distance and is predominantly rural to urban [Irfan, *et al.* (1983)]. The study also finds that the returning migrants from abroad preferred to reside in urban areas thereby increasing the level of internal migration.

The Determinants and Consequences of Internal Mobility

The determinants and consequences of internal migration were explored in a number of PIDE studies. Inter-linkages between internal migration, land holdings, and rural fertility were investigated using the data from twenty-six developing countries [Billsborrow and Winergarder (1985)]. In a two equation recursive econometric estimation rural fertility, and out migration from the rural areas were endogenously explained. The results were indicative of the interdependence of rural fertility and migration-the higher the rural fertility the higher the rural urban migration. The land holding pattern also exerted its influence on migration. Treating migration as an investment in human capital, a study looked into the socio-economic determinant of the mobility in Pakistan [Ahmad (1994)]. Using the PLM data, the 1979 migration estimation decisions were estimated using the maximum likelihood probit estimation. The possession of human capital, commitment to job, costs of migration and place of residence were found to be the major determinants. A major finding of another study was that the professional and post graduate level of education have a strong effect on the probability to migrate [Khan and Shahnaz (2000)]. A study confined to the assessment of the effects on sending areas finds that the rural-urban migration siphons off the young and better educated workers which may have negative effect on the

productivity levels in agriculture and rural areas in general. Remittances sent back by the migrant labour yield a very low level of rate of return to the investment incurred on migration, besides worsening income distribution [Irfan (1986)].

International Migration

Emigration essentially pre-dates the creation of Pakistan, firstly under the indentured system to East African plantations and subsequently during the Second World War when seamen took over industrial jobs in UK. Pakistan also experienced emigration of the educated beginning in the 1960s to UK, USA, Canada, Germany and the Middle East, which still continues. Emigration to the Middle East as a consequence of oil price hike was massive [Arif and Irfan (1997)]. Between 1975- and 1982 the emigration to the Middle East siphoned off almost one-fourth of the incremental labour force, thereby providing a safety valve to the population pressures, acquiring the status of a major policy objective.

The Middle East emigration tended to stagnate during the later half of 1980s. Since the data on return migration is virtually non-existent; the official data on annual placements can hardly be treated as net outflows to be translated into net increase in the stock of Pakistanis in the Middle East or elsewhere. However according to official data on annual placements, 4.6 million Pakistanis went abroad, mainly to Middle East during 1971-2009 [Arif (2009)].

PIDE's research exercises in this field have been theoretical, analytical, as well as empirical. Research and data generation exercises were geared towards estimation of the stock of emigrants at a point of time and changes therein, their occupational and skill composition, the return migration and the related assimilation issues. Also the co-terminus inflow of the remittances and their impact on the recipient households, economy and the society were also studied.

Jhonson (1967) in a well referenced PDR article dwells at the very notion of 'Brain Drain' and describes it as a narrow nationalism, at the global level. In his view international migration is beneficial and generates gains in world efficiency. The author admits the policy problem of compensating the countries losing from this transaction through the loss of human capital. Institutional arrangements, however, to deal with these flows will lead to non-optimal solutions because the gainers will not be able to compensate the losers without ending up as

worse off. The author views the brain drain problem as a trivial factor in the overall development issue.

Another study concludes that evaluation of the impact of the educated labour emigration on the sending countries is a very complex problem given the large number of factors that affect this impact [Blomqvist (1986)]. Methods which may help in forecasting the outcome of various forms of labour migration are highlighted in another paper [Knerr (1992)]. According to the author, cost-benefit analysis is suited to the analysis of brain drain, but it involves a good deal of judgment. Regression analysis is least demanding but the results provide a limited and rough basis for designing the right policy instrument. The CGE modelling in principle allows a comprehensive analysis of changes in the growth and composition of macro-economic aggregates, but this type of modelling has a heavy data demand and cannot be implemented without ad hoc assumptions.

The fact that migrating workers remit foreign exchange does not automatically mean that migration is socially profitable, was the contention of another PDR study [Brutan (1980)]. Large scale emigration on a short term contract basis and the associated remittances inflow impact on the shadow prices of foreign exchange and labour which may in turn lead to misallocation of resources. Another exercise focusing upon the consequences of the relaxation of the immigration policy, assuming capital mobility between the North and South, suggests that in the long run the relaxation of the North's immigration policy does not affect the per capita income of Northern labour and immigrant workers [Abe (1980)]. The optimal policy for the Northern workers, according to this author, is free mobility in contrast to the discriminatory redistributive policy against the immigrants. These theoretical discourses have influenced the development thinking as well the empirical and analytical studies conducted at PIDE.

Wide ranging pursuits, data generation from national surveys to estimate the stock of emigrants at a point of time under the International Migration Project and Population Labour Force and Migration Project in 1979, and detailed analysis of the data thus collected on various aspects of emigration, are among the major efforts that were made to document the issues related to internal and international markets. The skill and occupational composition of the emigrants and the return migrants, duration of the stay abroad, the reintegration of the return migration and the co-terminus inflow of the

remittances were also examined. In addition, the social costs of emigration in terms of the effect on those left behind, were assessed through village studies.

With regard to the volume of emigration, in particular to the Middle East, firm estimates have been difficult to arrive at, though for 1981 it was estimated to be around 2 million [Gilani (1981)]. Most of the emigrants were semi-skilled and unskilled with three-fourths of them being production workers. The Average stay of the emigrant was found to be around 3 to 5 years. Though during their stay abroad, the immigrants sent around two-thirds of their earnings, yet they bring a good deal of savings on their final return [Amjad (1988)].

Remittances and Their Impact

Remittances, a co-terminus inflow of emigration, are essentially a self-enforcing contractual arrangement between the emigrant and the family. Motivation to remit ranges from altruism to self interest of the emigrant. In an effort to identify the determinants of remittances, a PIDE study [Nishat and Bilgrami (1993)] finds altruism behaviour, such as support for the family, a significant variable influencing remittances. The role of self interest, such as accumulation of property, also emerges to be positive; hence the provision of attractive investment opportunities will enhance the level of remittances to the economy. Research exercises at PIDE investigated the use of remittances at the household level, and the way the non-recipient households were different in this respect, and the impact of the remittances at the aggregate macro economic level including the GDP growth, and on the poverty levels in the country.

On the basis of a household survey conducted under the IMP project, it was found that 62 percent of remittances were spent on consumption, 22 percent on real estate, while the remaining went into real physical and financial investment [Gilani (1981)]. The propensity of Pakistani emigrants to remit was estimated to be around 78 percent, by a study based on ILO survey of 1986 of the returning migrants [Arif (1999)]. It was estimated that remittances were around five-fold of the earnings in Pakistan. The author viewed that a considerable fraction of remittances was directed to investment and savings depending upon the process and cost of recruitment, economic position of the household and the level of the human capital of return migrants. That the migrant households were on the average thrifty and did not have lavish

consumption expenditure as often conjectured, was the finding of another study [Malik and Sarwar (1993)]. These findings were based on 1987-88 HIES data through estimation of Marginal Propensity to Consume (MPCs) for different groups of households distinguished on the basis of the receipt or absence of remittances and further cross-classified by rural as well as urban areas.

The impact of workers' remittances has been examined from a variety of angles, micro, sectoral and macro perspectives. It was found that the remittances have had a far reaching influence on the domestic labour market and macro aggregates such as balance of payments position [Amjad (1986)]. At their peak in 1982-83, the remittances were equivalent to 70 percent of the export of goods and services of the country. Amjad emphasised the need to understand the effect of incorporating remittances in the national income accounts. Behavioural relationships need to be distinguished from the accounting practices while estimating the trends in the domestic or gross national saving rates. Research exercises utilising the time series data (a) 1969-70 to 1985-86 [Burney (1987)] and another study based on 1972-2003 data rather concurred on the positive effect of the remittances on the GDP growth rate. The results of a CGE modelling exercise highlighted the importance of remittances in the context of assessing the impact of trade liberalisation on poverty reduction [Siddiqui and Kemal (2006)].

Re-integration of the Return Migration

Return migration was an obvious outcome of short term emigration given the fact that around three-fourths of the married emigrants left their families behind, which is reflective of their intentions, in addition to the legal restrictions against permanent stay in the Middle East. Many studies explored the problems and patterns of assimilation of the return migrants, both in South Asia as well as in Pakistan. Asian migrants generally do not have the resources to establish even small scale manufacturing units which is why the investments by return migrants are concentrated in trade, commerce, and small transport enterprises [Kazi (1998)]. The author examined various measures taken by different Asian countries to facilitate the absorption of the return migrants but those could accommodate only a limited section of the returning labour, the vast majority of them being unskilled workers.

Utilising the 1986 ILO survey data on return migrants another study found that the majority of returnees could not be successfully re-integrated for more than one year [Arif (1997)]. A wide differential of unemployment rate between the return migrants and non-migrants was found. The study examined the transition from being unemployed to employed, using the proportional hazard model, the major conclusion being that human capital variables are more important than the savings made by the return migrant. On the basis of the same data source, another study highlighted the importance of the savings made from overseas jobs and its channelling into independent self-employment in business or agriculture [Arif and Irfan (1997)].

Consequences of Emigration

The experiences of the Mediterranean labour sending countries was evaluated by Korner (1987). The study maintained that the policy stance of promoting emigration as a safety valve to curtail unemployment and improve the balance of payment situation is workable only under a set of favourable conditions. The hindsight was suggestive of the fact that governments of the sending countries had an unrealistic conception of the migrating process in respect of anticipating the short term effects and long term modernisation effects on the economy and society. The positive short term effects of remittances and labour market relief were outweighed by the negative long term effects in the shape of perpetuation of balance of payments disequilibrium, inflation, and varied structural imbalances.

Pakistan's experience of labour emigration particularly to Middle East was also examined in detail [Sarmad (1985)]. The study viewed that the outflow of the unskilled labour has been beneficial in reduction of the population pressure on the labour market but the total impact has not been quite useful. There existed a strong evidence that emigration has stimulated mechanisation in agriculture. In urban areas considerable cost is incurred on training to replace the skilled and unskilled emigrants. The growing trend of consumerism promoted by inflow of remittances and the failure of governments to convert this into capital accumulation and economic growth created a wedge between the social and private returns of emigration.

Social Costs of Emigration

A number of researchers looked into the effects of international migration on women and the children left behind utilising the special

village surveys as well as other data sources. Admittedly, remittances income increases the welfare of the recipient household but the factors such as neglect of the children's education, excessive workload, and frustration of those left behind tends to counterbalance the positive effects [Bilquees and Hameed (1981)]. Another study viewed, in contrast to quantifiable gains, certain changes, hardly amenable to measurement, that have taken place [Abbasi and Irfan (1983)]. There is no way to impute it as the shadow cost of husband's separation but some evidence and clinical data reveal certain unhealthy developments. Children of the emigrants may turn into delinquents because of the absence of parental control. Though emigration may contain high fertility norms, the retention of the village as a viable socio-economic unit is difficult [Sirageldine (1983)].

4. WAGE LEVELS AND TRENDS

The importance of examination of relative earnings and manpower deployment in the developing world can hardly be emphasised [Reynolds (1969)]. The author identified the structure of earnings as a convenient starting point which may in turn necessitate the study of various sectors of the economy as well as labour mobility and educational and skill development. The wage structure, comprising a myriad of wage rates paid to different categories of workers in terms of skills and other characteristics by various firms and industries, is a result of the interactive outcome of the broad forces of growth. It also serves as an allocative device and influences the income distribution. The evolution of wage structure overtime is an important tool to evaluate the labour market, and can be analysed from different angles, such as wage levels and trends at the broad sectoral levels as well as intra-sectoral, inter-firm or inter-industrial categories. Wage distribution within the firm can be examined on the basis of the characteristics of individual workers. The historical pattern of the PIDE wage research is reflective of the influence of data constraints in the initial periods prior to the 1990s when the LFS and HIES started reporting the information on income and wages of the individual worker.

Inter-sectoral Wage Levels and Trends

A number of exercises have been attempted to document the hierarchy by average levels of wages using the broad industry/sectoral

classification and changes therein. A study based on the data from LFS for the period 1990-04 focused upon wage differentials, their dispersion, and differentials by regions through econometric estimation, using pooled and pseudo panel data [Jaffery, *et al.* (2006)]. While the wages were to be generally higher in urban than the rural areas, the provincial comparison appeared to be sector specific, for instance the Finance and Manufacturing were the highest paying sectors in Sindh, while in Punjab this status was acquired by Construction, Electricity, and Transport and Communication. During the fourteen years of the sample period, the financial sector was at the top of the wage hierarchy. The dispersion of wages across the industries, controlling for the observed human capital variable, were found to be substantial, highlighting the importance of the job characteristics.

For the period 1970-84, a study at PIDE examined the levels and trends of wages of certain categories of workers to infer the effects of different factors at the broad sectoral levels of agriculture, manufacturing, construction, and the civil servants. The study concluded that with the exception of the civil servants there were major improvements in the real wages of workers [Irfan and Ahmed (1985)]. International migration was identified to be the major factor underlying these developments, though certain other policy variables played a role. This enquiry was extended in another study for the period 1981-91 [Bilquees (1992)]. The major results remained unaltered, though Pakistan was experiencing return migration. The author attributed the rise in real wages in the informal sector and the large scale manufacturing industry to adoption of capital intensive technology by the employers. It may be added that a modelling exercise assessed the impact of emigration on wages using a 3×3 / trade-theoretic approach. The exercise predicted that emigration of skilled or unskilled workers in the long run will increase their wages [Mahmood (1991)]. The third study on the inter-sectoral wage differential and trends pertained to 1990-2007 [Irfan (2009)], a period characterised by reduction of foreign aid inflow and decline in growth rates, globalisation and implementation of WB/IMF reform packages. The wage growth profile at the broad sectoral levels indicated that the growth trend in the rate of wages was lower for the workers already at the lower rungs of the wage hierarchy. Wage employees in agriculture, for instance, registered a trend growth rate of 4.7 percent in contrast to 9.2 percent registered by Finance and Real Estate workers. Wage differentials widened and rendered the wage structure more iniquitous. An

econometric exercise using pooled and pseudo-panel data from the LFS for the period 1990-04 [Jaffry, *et al.* (2006)] also viewed that the dispersion of wages across industries, controlling for observed human capital and job characteristics was substantial and had increased during the period under review. That the liberalisation, as was experienced by Pakistan during the 1990s, widens the skilled/unskilled wage gap was a finding of another exercise based on neo-classical full employment four sector model [Gupta and Basu (2004)].

Wage Trends in the Large Scale Manufacturing (LSM)

A number of studies examined the wage outcomes in the large scale manufacturing sector from different angles, to ascertain labour market outcome and to infer variations in the living standards of the workers. Focusing on the real wages of the industrial worker, a study concluded that the real wages improved somewhat during the 1960s [Guisinger and Irfan (1974)] modifying the conclusions of a pioneering attempt [Khan (1967)] which showed that real wages had declined. The non-availability of data on non-cash benefit when the latter study was being conducted explains the difference between the conclusions of the two studies. For the period 1975-82, real wages of all categories of workers with the possible exception of government servants improved because of heavy outflow of workers, as already discussed. The average annual real wages of all employees at the aggregative level rose during 1990-95 but then stagnated with the result that real wages were roughly similar in 2000-01 as compared to 1990-91. There appears to be a divergence between the real wage trends of production and the non-production workers; the latter when trimmed in relative size yielded a real wage gain of 8 percent in contrast to declining real wages of the former during the same period [Irfan (2009)].

It may be noted that LSM has been subjected to a variety of changes during the 1990s, such as tariff rationalisation and privatisation, besides the structural transformation to support the export oriented industrialisation. Research exercises looked into the effect of these changes. Utilising the Labour Force Survey (LFS) data for the period 1970-2001 through an econometric investigation [Yasmin and Khan (2005)] the study noted that labour demand elasticities increase after tariff reduction, thereby exerting pressure on employment and wages [Yasmin and Khan (2005)]. Another study which assessed the influence of export promotion on textile sector concluded that the real

wages of both the production and non-production workers declined during the 1990-2007 [Irfan (2009)].

The studies exploring the pattern of inter-industrial category wage differentials within the manufacturing sector found the dispersion of earnings to be modest for 1955-70 period, with stability in the wage structure. In addition, a small number of variables, such as capital intensity, skill mix, and the degree of foreign participation, trade union strength and the share of labour cost in the total, explain the wage differentials [Guisinger and Irfan (1975)]. Pooled time series and cross sectional analysis of the industrial wages highlighted the importance of factor prices for input combination-a significant inverse association between wages and employment [Irfan (1974)]. Detailed data at the two digit level classification of industrial categories for the period 1990-2001 suggest that wage hierarchy remained stable, whereas during the period under review employment had increased in low wage industries.

The Wage Trends of Civil Servants

The overall average wages of the civil servants were generally found to be better than private sector. Some studies looked into the public/private and informal sector differentials too. In an exercise intersectoral earning equations using 2001-02 data were estimated. Public sector workers tended to have both higher average pay and education level than the private sector [Hyder (2005)]; similar results were reported by another study using 1996-97 LFS data [Nasir (2000)].

Wage rates of the government employees have been a subject matter of many exercises at PIDE. Because of being a key rate to be emulated elsewhere in the economy it can hardly be ignored. A plethora of cash and non-cash benefits, however, defy the efforts to evaluate the trends and levels of civil servants' pay structure. For the period 1971-76 it was found that while money wages rose by 22 percent till 1975, the gains were completely wiped out because of the runaway inflation [Naqvi (1977)]. In fact the real wages of the government servants fell by 13 percent during the said period. A study which extended the coverage to investigate 1977-92 period concluded that the real wages of the higher grade civil servants eroded. After reckoning with a variety of cash and non-cash benefits a study concluded that real wages of the civil servants suffered a decline or at best stagnated during 1999-2005 [Bilquees (2006)]. An exercise comparing the revision in the basic pay scales of few selected categories

with changes in cost of living viewed that during the period 1990-06 the real content of entry level basic salary has diminished [Irfan (2009)].

Rural Employment and Wages

An investigation of rural employment and wages revealed that the Green Revolution generated a strong demand for labour in the rural areas during the sixties which was complemented by the public sector employment expansion in the early 1970s. Emigration to the Middle East added further impetus. An increase in the real wages of the agriculture worker was found during the 1980s [Chaudhry (1993)].

Earning Differentials— the Role of Age, Sex and Ethnicity

Few studies investigated the wage differentials by various characteristics of the individuals. That male/female wage differentials cannot be explained by the productivity differentials alone, though human capital has a role to play, was the findings of a study [Siddiqui and Siddiqui (1998)]. Another study based on HIES 1993-94 explored the relationship between different age cohorts and earning inequality. The results suggested that the youngest (10-25) and the oldest (61+) have the largest contribution towards the overall inequality in personnel earnings [Nasir and Mahmood (1998)]. That ethnicity does not influence the earnings of an individual was the finding of a study based on data from Karachi [Ashraf and Ashraf (1993)].

5. DATA GENERATION

PIDE has encouraged researchers to conduct field enquiries pertaining to different villages and small cities in a number of cases. In addition to these efforts, there were two major data generation exercises which have acted as a milestone, the first one being the International Migration Project (IMP) with the financial assistance of the World Bank, and the second one being the Population, Labour Force and Migration Survey (PLM) with the help of ILO. Both of these exercises were geared towards filling the large data gaps which were being felt at that particular time and were construed as hindrance towards understanding some important issues.

International Migration Project

The major objective of the International Migration Project was to document the flow of out-migrants from the country and also to

facilitate inferences regarding changes in all the relevant variables in the economy. As a first round of enquiry, nearly 1500 migrants were interviewed at airports and a sub-sample of the households of these emigrants was subjected to detailed inquiry in the second phase. Through the conduct of this survey at that time, it was possible to estimate the stock of emigrants in the Middle East as well as to facilitate the assessment of the impact of emigration on different segments of the economy. There were three reports in addition to a number of articles written on the basis of this survey.

The PLM Survey

The ILO-financed PLM Survey generated a wealth of information which did not exist before in an analysable form. This study has shown new areas of thought and research: indeed, the PLM Survey of 11,288 households has initiated the economic-demographic research in Pakistan. Four questionnaires, on Fertility, Labour Force, Migration and Household Income and Expenditure were administered to each household covered in 1979. The main results of the Survey have been summarised in 11 research reports (see attached list) on such issues as the determinants of labour force participation, migration pattern in Pakistan, fertility levels, etc. These studies were written by different authors. In addition, the PLM data facilitated the write up of various PDR articles touching upon different issues, besides serving as a data base in a number of PhD theses.

ILO Survey of Out and Return Migrants with Technical Support from PIDE

As a part of an ILO study on Impact of Out and Return Migration on Domestic Employment and Labour Market in Pakistan, PIDE assisted the ILO in conducting a survey of return migrants between end 1985 and early 1986. The survey covered a sample of 1360 households covering both rural and urban areas in the country excluding Balochistan. The major objective of the survey was to understand the process of re-absorption of the return migrants into the labour market [see Amjad (1986) and ILO/ARTEP (1987)]. The survey data has been the source of many studies conducted by researchers including that of PIDE.

6. CONCLUDING REMARKS

The foregoing narrative reflects the PIDE's diverse and multipronged efforts in knowledge creation and dissemination regarding the labour market outcomes in the context of overall socio-economic development of Pakistan during the past sixty years. Theoretical relevance and rigour in empiricism has been the hallmark of the research efforts while strictly upholding academic freedom. There was concurrence and divergence in the findings of different research exercises which should not be surprising and should be considered productive for the continuity of the dialogue. What expectations can one have from the future labour market research at PIDE?

Recent labour market studies indicated that at the current juncture Pakistan finds itself suffering from various labour market problems. Unemployment is on the rise, the informalisation and casualisation of the job structure during the post-1990 period had a telling effect on the working conditions of the labour force wherein majority has experienced a decline in real wages. In other words, decent work is simply denied to the majority of labour. How to improve the conditions to provide decent work opportunities to workers must be a major focus by PIDE future research. This, in turn, will necessitate the examination of the roles of institutions and macroeconomic policies.

Ramifications of the massive exodus of the educated, the brain drain or human capital flight, have to be assessed both for short as well as long term perspectives. The effects of heavy out-migration on age structure, fertility behaviour, product and technological choices need to be anticipated and assessed. It is in this context that the research agenda of PIDE need to be cognizant of the dissonance between the education system of the country and labour market needs.

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