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Labour Market Participation of the Elderly

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INTRODUCTION

Generally ageing of population is defined as the relative increase in the number of elderly. This process is the result of declining fertility and increasing life expectancy of elderly population. In today's Pakistan, fertility has started declining and life expectancy of elderlies has been increasing and it is expected that in future both these processes will gain momentum, resulting into many fold increase in the population of elderly people [Afzal (1999); Sathar and Casterline (1998)].

These developments are expected to have adverse effects on Pakistan's economy as support and welfare of elderly people will require additional allocation of resources. That is more so because traditionally welfare and socio-economic needs of elderly people remained the responsibility of their children especially the sons. However, the traditional extended/joint family system is fast breaking down and nuclear type of family set up is becoming more common rendering the elderly people helpless [Ali (2000)]. Moreover, in view of an increase in the incidence of poverty in Pakistan, intra-house resource distribution is also becoming scarce leading to a scenario where only productive members are the chief beneficiaries [Qureshi and Arif, (2001)].

On the other hand in Pakistan, the social sector also remained neglected and little progress has been made in the development of health, education, nutrition, housing and physical infrastructure. Moreover, social security and pension scheme for general public is also almost non-existent. Such a situation warrants development of policies especially for elderly people in general and for all those elderlies who can participate and contribute in the economic activities in particular so that economic well-being of these people is ensured.

This study is an effort in this direction. In the first part of the study, we will assess the current economic status of elderly people and compare it with the overall economic status of the people of Pakistan. The second part will identify the most important factors responsible for the economic well-being of the elderly people.

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LABOUR MARKET PARTICIPATION OF THE ELDERLY: A REVIEW

The increase in the old age dependency ratio as evident in both the developed and less developed countries is expected to accelerate in the early part of the 21st century. Many industrialised countries, including Japan, have experienced a rise in the average age of employed person. The number of young economically active person has shrunk while the working populations aged 35–54 years and those 55 and over have expanded.

In the developed economies, the expected growth of the economically active population and rapid technological change might create problems in maintaining full employment until the turn of the century. And as the population grows older, the real brunt of the unemployment is faced by older workers. This is because the ageing of the labour force may significantly transform the wage and employment structure of firms as firms might substitute capital for human resources. Also growing number of older workers might narrow wage and salary differentials to the benefit of younger workers.

The job opportunities for older persons are determined by the relative supply of, and demand for, older workers. Industrial structure is one of the principal factors governing the labour market prospects of older persons [Durand (1975)]. In self-employment and the agricultural sector, older workers find it easier to forego retirement by switching job assignments and by reducing hours of work. However, self-employment and employment in family-related activities tend to be greater in the rural sectors. Thus, countries that are less urbanised and have a larger agricultural sector are expected to have higher labour force participation among older persons [Chen and Jones (1989); Arshat *et al.* (1989); Choe (1989) and Perera (1989)].

Labour force participation rate among the elderly in the countries comprising the Association of Southeast Asian Nations (ASEAN) remained quite high at ages above the official retirement age [Chen and Jones (1989)]. This serves to underscore the point that only a minor fraction of the ASEAN population except Singapore, in wage and salaried employment, is affected by compulsory retirement ages.

AGEING: THE CASE OF PAKISTAN

As mentioned earlier, the age-composition in Pakistan is changing as people are living longer and fertility has started declining. This phenomenon will lead to an increase in the proportion of old age population. The study of older age population in relation to the working-age population has significant implications for the society as a whole. The economic and social impact of this phenomenon is both an opportunity and a challenge to the society. If on one hand, elderly population constitute a valuable and important component of a society's human resources, on the other hand, the provision of assistance to the elderly people with long run support is becoming a great challenge to the society.

According to the UN statistics (1994 revision), the percentage of women and men 60 years and over in Pakistan will increase from 4.7 percent and 5.3 percent in 1970 to 15.4 percent and 14.1 percent in 2050 respectively. This shows much bigger change in the proportion of elderly population in 80 years. Another important thing to note is the reversal of male and female proportion. The process of this reversal was set in as early as 1995. Comparing with other countries of the region, the situation in Pakistan is not much different rather in some cases it is much better.

Table 1

Percentage of Women and Men 60 Years and Over, 1970–2050 (South-Central Asia)

	1970		1995		2050	
Countries	Women	Men	Women	Men	Women	Men
Afghanistan	4.3	3.7	5.0	4.6	11.3	9.9
Bangladesh	5.6	6.5	5.0	4.7	19.8	18.5
Bhutan	5.7	4.7	6.1	5.1	12.2	10.6
India	6.0	5.9	7.6	6.8	21.7	19.7
Iran	5.8	5.1	5.9	6.0	18.4	16.7
Maldives	5.3	6.2	4.8	5.3	13.3	12.4
Nepal	5.7	5.1	5.6	5.3	14.2	13.2
Pakistan	4.7	5.3	4.8	4.6	15.4	14.1
Sri Lanka	5.5	6.4	8.8	8.5	26.6	22.8

Table 2 shows the population 60+as percentage of population 0–14 by men and women in south central Asia 1970–2050. As mentioned earlier, by 2050, the proportion of elderlies will increase many-fold yet this proportion is not going to exceed from 0–14 age group population in 80 years i.e. in 2050. Some countries of the region however, will experience this phenomenon. Dominant among these countries are Sri Lanka, India and Bangladesh.

The elderly population is the vulnerable group in the society because the downturn of the economy put them in a situation where they face a large number of problems. Because of their old age, they are likely to be out of labour market and hence are dependent on the earners in a household or their savings. Furthermore, because of their competition with younger worker, their chances to participate in the labour market are low. The data from US shows that the proportion of men 55 and over in the labour force was 52.7 percent in 1970 which had fallen to 39.5 percent in 1985 [Ransom and Sutch (1988)]. Similar trend has been observed for elderly women. The main reason for this decline is the social security coverage, which is available to worker at retirement age. Venti and Wasi (1989) by using the data of the

Table 2

The Population 60+as Percentage of Population 0–4 by Gender in South Central Asia

	1970		1995		2050	
Countries	Women	Men	Women	Men	Women	Men
Afghanistan	9.9	8.7	12.2	11.2	50.6	43.7
Bangladesh	12.1	14.6	12.7	12.0	101.0	93.1
Bhutan	14.6	11.7	15.1	12.4	52.7	44.3
India	15.0	14.6	21.7	19.2	112.2	100.0
Iran	12.6	11.2	13.6	13.7	86.1	76.7
Maldives	1.5	14.8	10.3	11.7	56.0	52.1
Nepal	14.1	12.1	13.5	12.2	62.4	57.5
Pakistan	10.2	11.5	10.7	10.4	68.9	61.7
Sri Lanka	12.7	15.6	29.5	26.9	141.7	114.1

Source: UN (1994).

Survey of Income and Programme Participation (SIPP) of America found that most families approach retirement age with very little personal savings. The majority of families rely heavily on social security benefits for support after retirement and to a limited extent on the savings made through benefit pension plan.

Country like Pakistan where very limited social security coverage is available to workers, it is expected that more elderly people will be in the labour force compared to the total labour force i.e. 10+. To support the economic dependency of elderly on society we use data from 1981 census and compared it with labour force survey data of 1997-98. The data of 1997-98 Labour Force Survey indicate that the proportion of 60+ population in labour force was 43 percent in 1997-98 compared to only 29.4 percent of those 10 years and above. This is in spite of the fact that the labour force participation in the 10 years and above population increased by 2 percent between 1981 and 1997-98, however no significant change is observed for elderly population during the same period. The increase in the proportion of female workers in the labour force of 10+ years population had the dominating effect on the overall rates.

The increase in the labour force participation of elderly females could be attributed to the increase in the life expectancy and widowhood. Moreover, the increased incidence of poverty has also forced them to participate in the labour market as in the absence of social safety nets and declining support from their children this is the only option left for them to survive. The surveys conducted in India reveals that the elderly population is increasingly dependent upon their adult children, which is reverse of the situation of the past [D'Souza (1989)].

The structure of employment by work status is presented in Table 3. The table shows that majority of workers be they 10 years and above or 60 years and above are self-employed. Interestingly, there is a decline over the years in the proportion of workers in this activity. The worsening of the business activity in the country and overall slowing down in the economy has forced people to shift to other employment status. Particularly, the female workers have joined the pool of unpaid family helpers. This explains the increasing dependency of elderly women on their family.

Table 3

A Comparison of Population 10+with 60+Years Old, by Employment, Status, and Sex

	Population Census 1981					
	Population 10+			Population 60+		
Employment Status	Both	Male	Female	Both	Male	Female
Self-employed	55.75	56.57	33.46	78.13	78.71	48.45
Employee	27.24	26.86	37.66	15.61	15.31	30.67
Employer	1.99	2.03	0.99	3.15	3.18	1.59
Unpaid Helper	15.02	14.55	27.89	3.11	2.79	19.29
	Labour Force Survey 1997-98					
Self-employed	41.86	43.50	22.14	72.60	76.40	19.80
Employee	44.55	44.30	48.19	19.00	19.00	19.30
Employer	1.44	1.55	0.13	1.60	1.70	–
Unpaid Helper	12.15	10.70	29.55	6.90	2.90	60.9

The distribution of employed by their occupations is presented in Table 4. A comparison of employed (10+) with elderly (60+) does show major differences in the agriculture sector where a much larger proportion of elderly workers are accommodated. In general, agriculture remains the dominant occupation for both the groups.

The other occupational groups show lower proportion of elderly workers compared to the all workers. Interestingly, the administrative occupation is the only exception group where elderly population has higher proportion as compared to total employed.

Table 4

Distribution of Workers, by Occupation and Sex, LFS 1997-98

	Population 10+			Population 60+		
	Both	Male	Female	Both	Male	Female
Professionals	7.3	6.7	12.9	3.6	3.6	3.1
Administration	12.7	14.1	2.0	13.9	14.7	3.0
Clerical	2.6	2.9	0.5	0.6	0.7	0
Service	6.9	7.5	1.5	3.5	3.7	1.5
Agriculture	33.1	30.7	52.1	54.2	53.1	69.2
Production	17.9	18.7	11.0	10.5	10.9	5.3
Others	19.5	19.4	19.9	13.6	13.3	18.0

DATA AND METHODOLOGY

The main source of the data used in this study is the Labour Force Survey 1997-98. Some of the information from 1981 census is also utilised for comparison purposes. The Labour Force Survey 1997-98 is the latest of this series and provides ample information to carryout the present analysis. The 1997-98 LFS covered 18160 households in four provinces of Pakistan. It provides information on age, sex, and marital status, level of education, current enrolment and migration. The information on different dimension of labour force is also available through which one can calculate the activity rate, unemployment rate and other related statistics. The occupational distribution and employment status of the working population ten years and above is also available. The elderly population in our analysis is considered to be the ones who have attained an age of at least 60 years. The survey identifies 5629 persons who are 60 and above. Majority of these people are rural residents (57.7 percent) and mostly are married (71 percent). Very few of them are never married whereas 28 percent of them are widowed. As expected females constitute a higher percentage (64 percent) among this category. The educational attainment of elderly population is not very encouraging because 81 percent of them are illiterate very small percentage have education above matric but a good number has vocational or technical training. Surprisingly the unemployment rate among elderly population is even lower than the unemployment rate at national level. Labour force participation rate is also comparatively higher (39.8 percent) among elderly than among 10+ population (29.4 percent).

To examine the probability of labour market participation in relation to selected variables, Probit analysis is carried out. The participation of an elderly in labour market activity is defined as a dichotomous variable that takes value 1 for participation and zero otherwise. Labour market participation variable is constructed of several questions on employment and unemployment status of those who are in

the labour market. In this analysis, the coefficients provide the probability of Labour Force Participation due to that particular factor.

The control variables used in the analysis are the age, place of residence, head status, marital status, literacy, technical training, number of earners in the family whether the person is living in a nuclear family or extended family. It is expected that probability of an elderly's labour market participation decline as he attains more years of life. This is mainly due to his low mobility and health status, which deteriorates with age. Living in the urban areas is considered less helpful for elderly people in obtaining gainful employment because more young persons are available due to high unemployment in the urban areas. More than one earner in the family reduces the chances of an elderly to actively participate in the labour market. Admittedly, a better determinant of labour market participation is the total earnings of the household however, labour force survey does not gather this information thus we consider the number of earners as proxy for household earnings.

Literacy status of the elderly was considered in the analysis as to see how human capital affect the probability of the elderly to participate in the labour market. We expect that it increase the probability of elderly to participate. If marriage is intact, the chances of labour force participation of male may not be affected however, if female is currently married, her chances of participation in the labour market are reduced. This is because in this male chauvinist society, husbands rarely allow their wives to participate in the labour market. Those who have any vocational or technical training have higher probability to participate due to their skills. And finally we expect that living in a nuclear family impart more responsibility on the older person to participate in the labour market provided there are no other sources of earnings.

The model to be estimated is:

$$LFP = f(AGE, MSP, LIT, VTT, UR, EARNER, NF, SEX)$$

LFP is a binary or dichotomous variable which takes values 1 if worker is taking part in the labour market activities, and zero otherwise. AGE is taken as reported age of the individual. MSP represents the married people living with their spouses. It is also entered as dichotomous variable, which takes value 1 if currently married and 0 otherwise. LIT variable is used for the individual who has formal education; VTT represents vocational and technical training an individual has received. UR is used for the urban-rural residence. Similarly NF is used for those who are living in a nuclear family. All of these variables are dichotomous i.e. takes value 1 and 0. The variable EARNER is used to capture the effect of earnings on labour market participation.

EMPIRICAL RESULTS

The results of probit estimates are presented in Table 5. The estimates indicate that age of the elderly reduces their probability to participate in the labour market.

Table 5

Probit Estimates for the Labour Market Participation of Elderly

Variables	Both Sexes	Male	Female
Constant	–282.70	–289.85	–291.28
	(–47669.22)	(–30526.30)	(–2348.93)
Age	–0.077	–0.021	–0.0841
	(922.57)	(–165.21)	(–331.79)
MSP	–0.1537	–0.0744	–0.2221
	(–852.24)	(–285.09)	(–891.50)
Lit	–0.3630	–0.1190	–0.8730
	(–205.67)	(52.18)	(–151.78)
VTT	0.4290	0.7800	0.1870
	(–75.59)	(106.43)	(10.07)
UR	–0.0168	–0.04041	–0.5840
	(–1286.32)	(–197.96)	(–231.92)
Earner	–0.5660	–0.9500	–0.5490
	(157.78)	(–45.43)	(–85.78)
NF	0.2510	0.6130	–0.8660
	(102.28)	(29.18)	(–200.90)
Sex	0.0360	–	–
	(157.78)		
Ψ2	31028	1182.5	7218.0
DF	5620	3321	2292

Number in parenthesis is the *t*-value.

The effect of age is more pronounced for female compared to male. Considering the household sharing responsibilities in our society, the findings are not off the line. The likelihood of married who are living with spouse to take part in labour market activities is lower than those who are either single or widowed. The probability of labour force participation is higher for female if they are widowed. This result is also in confirmation with the hypothesis stated above.

We expected positive effect of human capital variables on the labour market participation of elderly but results do not support our hypothesis in case of literacy. The probability of not taking part in the labour market is much higher for literate individual. Literate females are more likely to not participate in the labour market compared to males. Most probably due to their human capital they may have done those jobs, which are protected and have pension, social security or other old age benefits. These benefits may reduce their probability to take active part in the labour market. As expected technical and vocational training increases the probability to

participate for both male and female individuals. Number of earners has highly significant effect on the probability of elderlies to with draw from the labour market. This also reflects the social set up of the society where elderly people are not encouraged to actively participate in the labour market. The probability of males labour market participation increases if he is part of nuclear family but reverse is the case for the elderly females.

The rural residence increases the probability of both male and female to participate in the labour market. This is due to norm of the rural society where concept of retirement is not in place and everyone has something to do like older people can take care of live stock and take part in other agricultural activities not requiring hard work.

CONCLUSION

To sum up one can say that ageing is not a serious problem at this point of time. Moreover, a large proportion of elderly population is involved in economic activities. But with the passage of time due to changes in the demographic scenario, the number and proportion of elderly population will increase many-fold. Furthermore, industrialisation accompanied by the mechanisation of agriculture sector will reduce the human resource utilisation in general; however the elderlies in particular will face the real brunt. The breaking up of the traditional joint family system will further make them vulnerable, as they would have to sustain and survive on their own.

Elderly people are the asset of any nation. They have experience, wisdom and knowledge, which can be used for the national reconstruction. It is the responsibility of every one to take care of our national asset and utilise their experience. They should not be treated as dis-functional. Short duration technical training programmes should be evolved for the elderlies as per their physical and mental capacity so that their services are utilised productively. The NGO's and other social organisations should device programme and talk shows where both young and old people sit together and discuss the fine realities of interdependence.

The role of family and living together within the purview of traditional family set up should be strengthened. At the government level social security and health insurance should be provided to the elderly population so that they can live honourably and comfortably. This step should be taken as an obligation in return for their contribution towards society.

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Comments

The efforts made by the respected authors are appreciable as they have drawn the attention of policy-makers about the consequences of growing magnitude of the older people after half a century and remedial measure to be initiated or under taken from now onward. However, I believe that there is always a room for improvement. With this presumption I would like to offer some comments based on my knowledge and belief. As you know that the entire paper is divided into six sections namely, Introduction, Labour Market Participation of Elderly: A Review, Aging: The Case of Pakistan, Data and Methodology, Empirical Results and Conclusion.

Under the introduction section instead of introducing the topic i.e. why the author has picked up the topic, is any work have been done somewhere else and with what findings, what are the limitations and what are the grey areas where such studies failed? However at end of one and a half page introduction the authors have given two fold objectives of the present study and that is just in four lines. It would have been more appropriate if findings of other scholars/research workers have been incorporated in the text in confession of conformity or inconformity of this study findings. However findings of other workers can be quoted in the introduction for development of assumptions or hypothesis to be tested later on in the study. The text under the section 'Aging: The Case of Pakistan' does not justify the heading, rather data of 9 South Central Asian Countries and USA have been discussed. Whatever the material is given for Pakistan is inadequate, incomplete, contradictory and confusing (you may like to see para at page 6 starting from the words "Country like Pakistan and end at the words dominating effect on the overall rates' first five lines of its follow on para and third/fourth lines of para 2 at page 1). Either text may be re-structured to justify the heading of the section or a suitable caption may be given which would reflect the actual text. It would be prudent to change the heading rather than the text. The data given in Tables 1 and 2 are based on UN Publication revised in 1994 whereas indigenous data available with PIDE, NIPS, FBS, Population Census Organisation and other agencies have been ignored. Why? This raises many debatable questions in its favour and disfavour which is not our goal at the movement. The study has foreseen many fold increase in percentage of population 60+ around 2050 putting us in a gloomy situation. The question is: will we really face such a situation after 50 years? To answer this question let us examine figures of Pakistan given in Table 2 with the help of proportion of female and male children under 14 recorded in the 1981 Census. Accepting the proportion of women and men given in Table 1 for the year 2050 as correct and re-working out the population 60+ as percentage of 0–14 by gender using the 1981 Census figures the new figures emerged are 30.2 and 26.5 as against 62.4 and 57.5 given in Table 2 of this study. Reverse to this, now let us accept percentage women and men 60+ for 2050 as

correct figures, dividing the same by the 1981 figures for women and men (0–14) the new computed figures would be 35.2 and 32.8. So both way the population 60+ as percentage of population 0–14 of women and men for the year 2050 given in Table 2 of the study are not only inconsistent with census figures, creating doubt about the reliability of data picked up for the present study but also suggest that by 2050 we will be still in far better position as compared to many other countries of the region.

Comparative data from two sources given in Table 3 regarding population 10+ and 60+ years old of employment status and sex is likely to misguide in drawing any meaningful conclusion because of inherited conceptual problems. The 1981 Census has used gainfully employed concept whereas LFS 1997-98 has adopted more or less labour force concept, representing less than 1 percent of the universe and besides non-sampling errors it also carries sampling errors. These problems are the main impediments in their comparability and drawing any meaningful conclusion. Either two successive censuses data or two surveys conducted at reasonal interval apart should have been used.

For study of empirical results the study main reliance is on probit analysis which covers 9 different variables. It would have been more appropriate if alongwith literacy the paper has covered the educational level and their field of specialisation as both these are considered to have direct bearing on employment and earning level. May I also suggest putting of one asteric sign on left side of the figures for 10 percent, two asterics for 5 percent and three asterics for 1 percent level of significance for the guidance of readers. Also I would request the authors to re-check the figures as some figures are apparently looking inconsistent perhaps because of missing of minus signs.

The study has successfully identified factors affecting labour force participation but nothing is said in the conclusion accept that aging is not a serious problem at this point of time. Instead it has given many advisory remarks which may not be made as the part of a research paper. Comparative data has not been used in the study which imposed problem but the conclusion part is salient about highlighting the problems, bottlenecks etc.

Many suggestions could have drawn from the study but, like conclusion, the study is also salient about suggestions and recommendations except suggesting technical training programme for older people. Many grey areas could be pointed out suggesting further carrying out in-depth study on the topic but nothing have been said.

The study can be improved further in the light of this discussion if appealing to worthy authors, Sir, otherwise suggestions may be ignored.

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