



THE ROLE OF HUMAN CAPITAL FOR EMPLOYMENT GROWTH: A CASE STUDY OF HEIS IN JAMSHORO EDUCATION CITY

Sajjad Hyder Channar
Assistant Professor
Department of Public Administration
University of Sindh
Jamshoro – Pakistan
sajjadchannar2@gmail.com

Shazia A. Jatoi
Ph.D Scholar
Institute of Business Administration
University of Sindh
Jamshoro – Pakistan
shazia_aman@hotmail.com

Waqar A. Sethar
Lecturer
Mehran University Institute of Science, Technology and Development
Mehran University of Engineering & Technology
Jamshoro – Pakistan
waqarsethar@gmail.com

Abstract

The scope and purpose of this paper is to examine the influence and extent of human capital on the employment growth. Such measurement is taken from the higher educational Institutes (HEIs) as empirical evidence. The paper would measure the important factors of the human capital such as education, training and experience as the basic catalysts for the formation of the human capital and when it's utilized in organized manner it's incidence on the employment opportunities at micro level and on economy at macro level. Quantitative method is used for this paper, because the aim is to classify features, count them, and construct analysis in an attempt to explain what is observed during the research. It is found that whether it is the general or specific human capital, there should be an urgency to develop customized (need based) skills and competencies to cater the needs of certain industries. It is further transpired that the blend of general (education) and specific (training & experience) human capital ensures the positive growth of employment, as both these factors complement each other.



Key words: Human Resources, human Capital, Training & Development, Employment growth.

1. Introduction

Human Capital is the viable source of economic as well as employment growth. With the advent of the new millennium, it's imperative that the nations must foster the incidence of the human capital in order to achieve the tangible as well as intangible prosperity. As a theoretical concept human capital is recognized one of important factors for a national economic growth in the modern economic system, Schultz (1961). Such human capital could be divided into two main types: General Human Capital and Specific Human Capital. The specific human capital deals with the trainings & experience and usually firm-based in nature while the general human capital relates to the non-specific and could be applied to all kinds of firms & work settings. These both kinds of human capital foster the prospects of employment growth, which could translate itself into economic progress.

The need for the human capital in the industrialized countries is ever increasing phenomena in the form of immigration from underdeveloped countries clearly indicates the ever growing demand of the human capital for the employment sector. And the underdeveloped countries need to gear up the human capital through quality education, & transferrable skills. Conceptually, according to Lucas (1988) the investment on human capital connected to the socio-economic development and productivity growth. The differences in the human capital are central in the analysis of growth and development. When it comes to gauge the economic & employment opportunities at the national level. With recognizing the importance of human capital, many countries have tried to effectively and efficiently measure their human capital to understand their current status and thereafter implemented various ways to improve their Human Resources/Capital.

Pakistan though has huge population, but it is mostly illiterate and unskilled hence living in poor conditions. Human beings can increase capital and build up socio-economic organizations, through unceasing learning and skills acquisition. Ali et al (2012) observes that the nation state like Pakistan or any underdeveloped country can never develop anything for economic growth, if it doesn't develop the skills of its human beings. It is clear that effective development of human beings through literacy, skill development and by quality enhancement may slash down the unemployment and enhances the process of growth. There are lessons to be learnt from the nations who have developed their human capital through education, trainings and experience.

The objectives of this paper are to examine the impact & extent of general and specific human capital on the employment growth. Such examination is taken from the higher educational Institutes (HEIs) as empirical evidence



2. Literature Review:

Human Capital:

Rastogi (2002) conceptualizes the human capital as knowledge, competency, attitude and behavior embedded in an individual, and it is recognized as one of important factors for a national economic growth in the modern economy. Similar to this understanding Garavan (2001) and Youndt (2004) assert that the human capital can be related to knowledge, skills, education, and abilities.

Gary S. Becker (1976 b) argues that the basic resource in any company is the people. The most successful companies and the most successful countries will be those that manage human capital in the most effective and efficient manner.

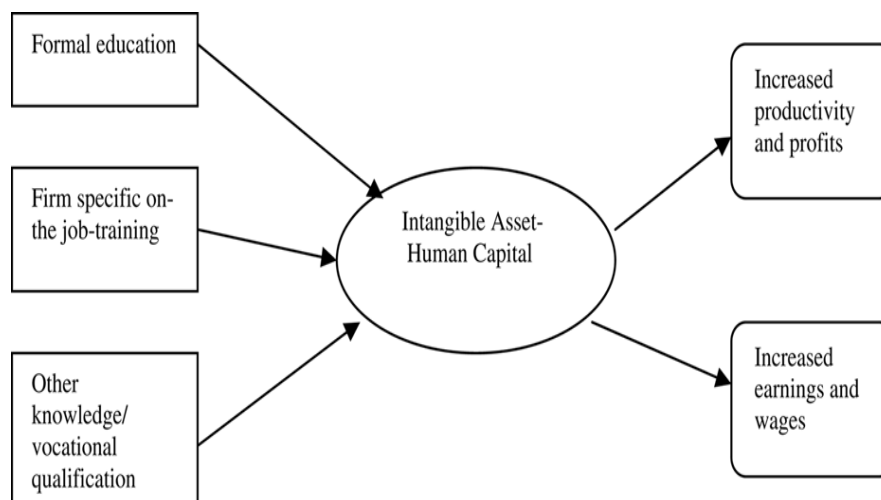


Figure 1: Human Capital Diagram

Broadly, human capital is categorized into two types: namely: General and Specific

i) *General Human Capital*

According to Alan et al (2008), general human capital is to be defined by nonspecific knowledge and skill, not specific to a task or a company, usually amassed through trainings and education. The general human capital holds exchangeable characteristic across jobs, firms and industry. It is relatively easy that the general human capital rooted in an individual transfers to different industries. It has been extensively researched by Trostel, Walker, & Woolley (2002) and found that education of the workforce has positive bearing on labor productivity and earnings. There is general finding that individuals with more education tend to have better employment opportunities, greater earnings and produce more output than those who are less educated.

ii) *Specific Human Capital*



In contrast to the general human capital, firm/task specific human capital is usually accumulated through training, and working experience on knowledge specific to a firm/task (Alan et al (2008)). As pointed out by Becker (1976a), the specific human capital is rarely transferable to other jobs, firm, and industry, consequently, it is difficult that the specific human capital rooted in an individual transfers to different industries due to its work and firm related nature.

Nelson and Phelps (1966) made the link explicit in what they termed investment in humans, workers needed education in order to utilize new technologies, thereby increasing total factor productivity and spurring economic growth. The nexus of general and specific capital effectively leads to the greater employment growth and which may enhance the overall economic growth. Hence, the combination of general and specific human capital is the need of the hour to boost the employment opportunities.

Human Capital's Broader Implications for Employment Growth:

Economic growth takes place mainly due to labor productivity growth and employment growth. The empirical research confirms the important impact of investment in human capital on economic growth. There are two key growth-enhancing effects of human capital. First, it contributes to economic efficiency. Second, it provides the labor resources on which growth depends. As better human capital is typically associated with higher employment and that, in turn, provides the human resources needed to support economic growth.

Woodhall (2001) presents that the investment of human capital is more effective than that of physical capital. Throughout the investment of human capital, an individual's attained knowledge and skills can easily transfer to certain goods and services (Romer, (1990)). Considering that accumulation of knowledge and skills takes charge of an important role for that of human capital, there is a widespread belief that learning is the core factor to increase the human capital. Hence, the effects of the human capital general as well as specific couldn't be underestimated in determining the economic growth of any given society and state. Graff (1995) examined the role of human capital in explaining economic growth in some 114 countries from 1965 to 1985, and the results showed the accumulation of human capital, physical capital and technological progress all to be important factors of the growth process.

3. Research Methodology:

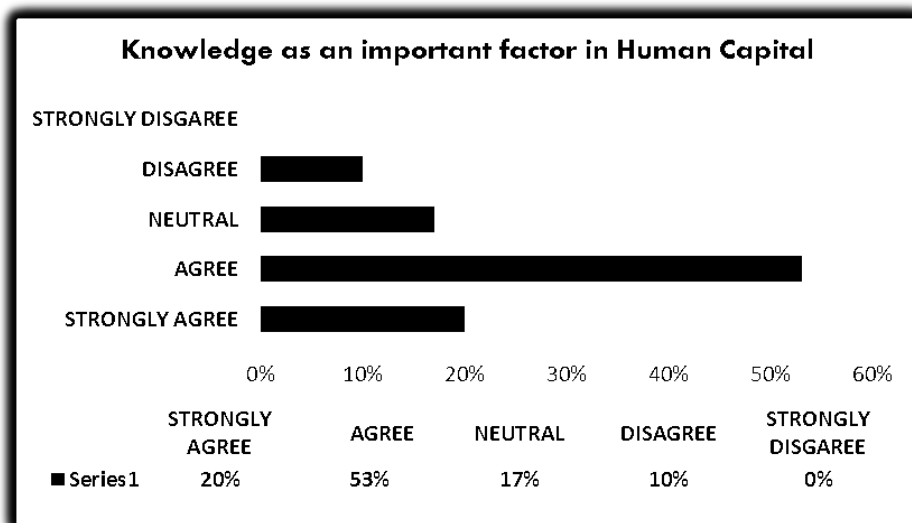
For this research quantitative methodology is used and survey questionnaires are designed to collect the data. Specific questions are designed to measure the general and specific human capital on the 5 level likert scale format, comprising the variables such as education & training and experience. The specific Higher Education Institutes (HEIs) are chosen to collect the data. The selected HEIs were University of Sindh, Liaquat Medical University and Mehran University of Engineering & Technology, Jamshoro, for which a sample of 150 is used, out of which the response rate of return was 60, which is the 33% of total sample. The research sample mainly employed the academia of these higher institutes as core respondents, the sample of university faculty members is chosen on the grounds that they were more aware



to the nuances of human capital than ordinary people. These respondents were chosen at random, regardless of professional stratifications.

Result of 60 respondents of questionnaire survey is analyzed on MS Excel. The graphical presentation of the data clearly demonstrates the objective co-relevancy of the topic 'Human Capital's impact on Employment Growth'. Each factor of the Human Capital such as Education, Training and Experience is analyzed accordingly to infer the objective meaning.

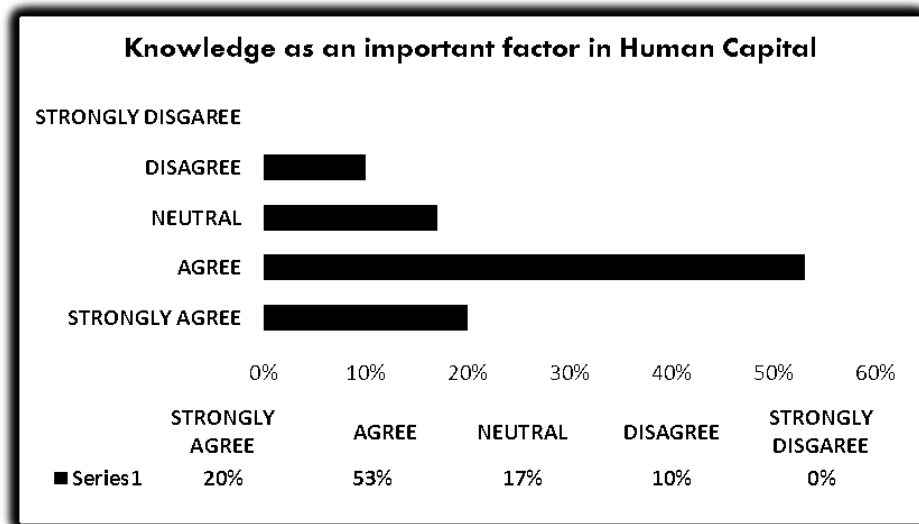
3.1 Human Capital's impact on employment growth:



Human Capital & Employment Growth

n=60

The empirical evidence suggests that the human capital, both in term of general and specific are pivotal for the employment growth. The education institutes are mainly responsible for catering the needs of general human capital while the industrial sector is producing the invaluable task-based or firm based human capital, the blend of both kinds of human capital is necessary for the overall growth of the economy which could ultimately leads to the increased opportunities for the employments. In developed nations the economic development is due to the employment growth, which in turn due to ever expanding human capital. The scarcity of the human capital leads to the unemployment and the stagnant economy, whereby the new ventures of social and economic development are hampered. With human capital new skills and creative endeavors' come forward to play effective role in the prosperity of the organizations and create an environment of economic prosperity. Human Capital would help in to create to ventures in public as well in private sector of economy and would hence lead to innovation and entrepreneurship.

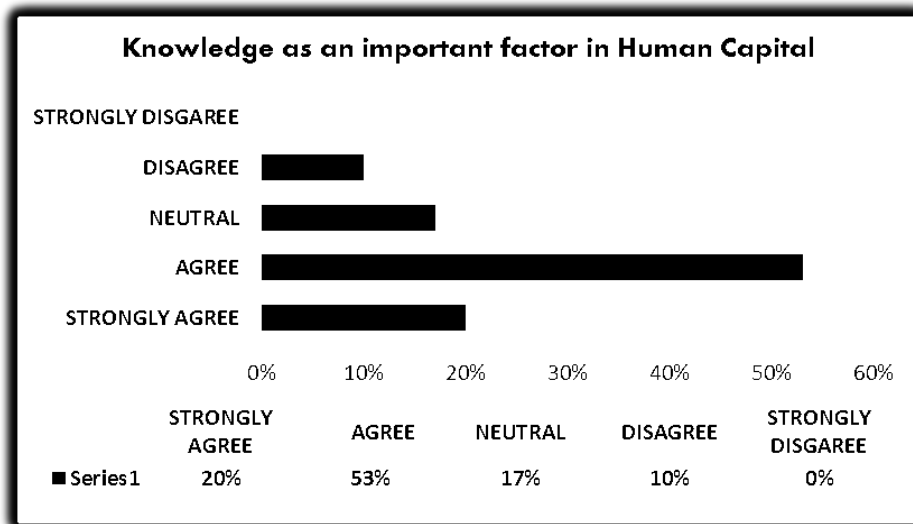


Knowledge as factor in Human Capital

n=60

Knowledge is the single most important factor in the general as well specific human capital. As research evidence indicates that the knowledge based worker is far more productive than the non- knowledge based. It is further deduced that the knowledge should be increase 'incrementally' throughout life time. In organizational settings that management should device the mechanisms for the effective imparting of the knowledge based training, in terms of seminar, workshops, refreshing courses and expert interactions. In educational settings that innovative patterns may be incorporated to update prospective human resources to learning and assimilate the knowledge based skills and intelligence. With less knowledge the market valuation of the worker would be badly hampered and his or her contribution to the organization and overall society would be limited.

Furthermore, the level of knowledge of worker is directly proportional to the earnings that a worker is drawing and making him or herself marketable. Hence, it's imperative that the subjective as well as objective knowledge should be imparted, so that worker's market value shouldn't be compromised. Unfortunately, in Pakistan neither the government nor the individuals are interested to enhance their level of knowledge hence compromising the large portion of otherwise potential human resource. China has risen to highest levels of economic prosperity by inducing knowledge based workforce.



Compulsory education and Human Capital

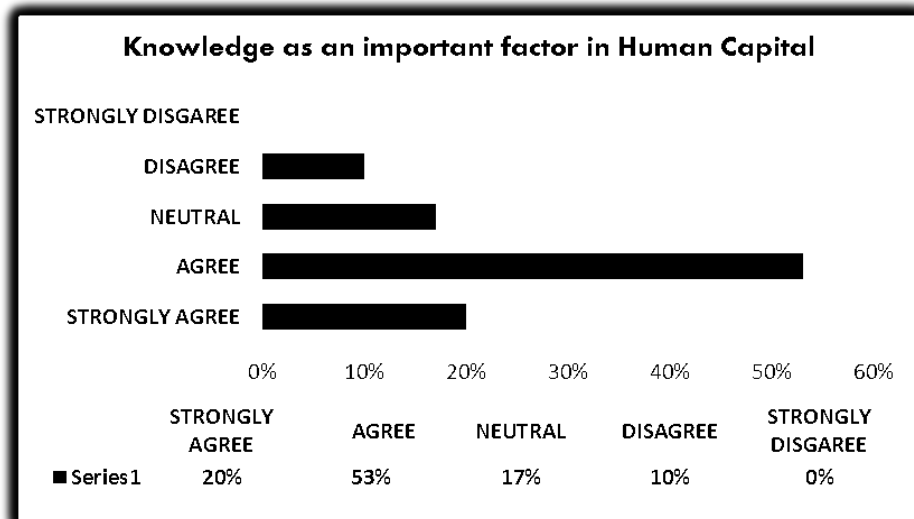
n=60

There is overwhelming agreement on the compulsory education as means for general and specific human capital. The negligence of the primary, secondary and higher education is the root cause of unemployment. Like developed countries the education must be 'Universal' and accessible to all. Germany which is the third biggest economy in the world has achieved that feat by making its higher education free of cost, which led to the ever increasing research and innovation. Pakistan though being one of the thickly populated nations in the world is lagging far behind in introducing the radical change in the dissemination of education at the grass root levels. Such non serious attitude led to the ever increasing illiteracy and subsequent growth to the crime especially in the youngsters. Even, with specific and firm based human capital which is mainly accumulated through experience and on the job dynamic, the need for education is still very much due to the fact that education may lead to the enhancement of the vision and better decision making skills.

The government should use the 'compulsory education' as the vital tool for enriching the other apathic human force and prospective work force. The schools, colleges and the universities along with polytechnic institutes emphasis the need for continuous learning and the negligence of the compulsory education on the part of public sector as well as private sector may be dealt without impunity. Unfortunately the statistics for education in under-developed nations are quite bleak which needs to be revived at any cost. The reasons for Pakistan's low educational status are varied but one important factor is that Pakistan's educational system is highly fragmented and segmented. It has, therefore, created some inflexible problems in the best consumption of human resources under the given labor market conditions ¹



1. Husian, Ishrat, *Education, Employment, and Economic development in Pakistan.* , Inaugural Address delivered at the Conference on Education held at Woodrow Wilson Center, Washington D.C. on April 15, 2005.



Planned Human Capital & Employment

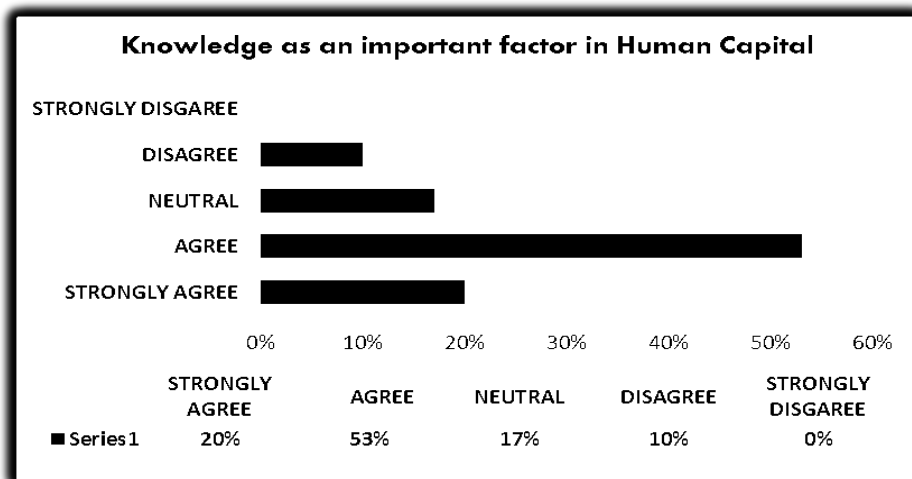
n=60

Evidence strongly favors the meaningful Human Resources Planning (HRP), as the basic foundation for the employment opportunities in the society. It transpires from the data that when the Human Resources are not planned scientifically it may lead to unemployment. For example how many numbers of doctors and engineers for a period of 5 years are required for the appointment slots in public as well as in private sector is very much domain of the Human Resources Planning. The classical example is that of china which has effectively planed its manpower through 'single child family' policy, as with the decline of growth of population, China is more able to plan its human factor for the employment prospects. It mainly due to non-application of HRP inPakistan that we witness the overwhelming number of jobless people, as when the demand for engineers in a given year 1000, we are producing 5000, such incongruence lead to unemployment, as the supply is much higher than the demand. Hence the HRP involves simple economics principle of 'demand and supply'.

It is therefore imperative that at the highest level of government that policy makers take heed of the prevailing unemployment and devised realistic Human Resources (HR)polices to absorb the ever growing number of youngsters who are vying for the suitable work. In turn when the effective Human Resources Planning (HRP) policy is in the place the incidence of the unemploymentcould be reduced and the economic activity may then bolster. All developed nations in the world are following the effective HRP, whereby they channelized their human capital to energize the public as well as private sector, including industrial& vocational settings.



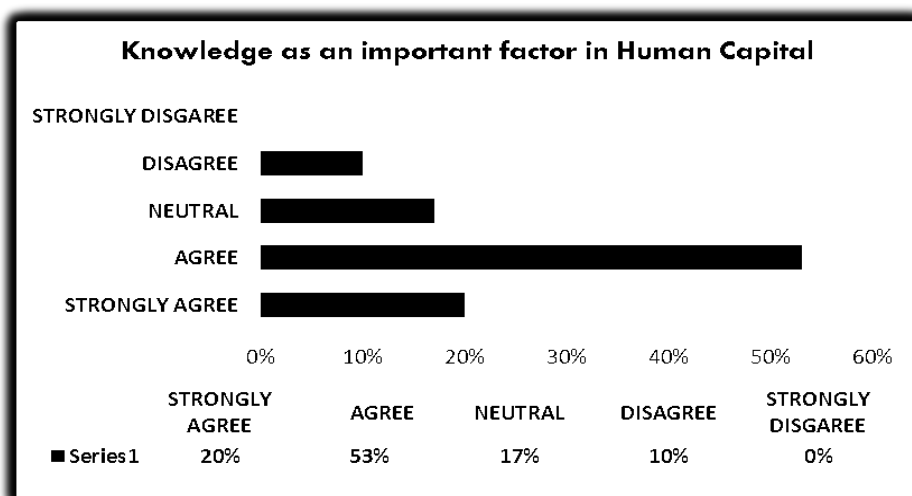
Incidence of General Human Capital (Education & Training) on Employment Growth



Levels of Education

n=60

There is a strong agreement on the attainment of basic education which means proper schooling. The impression of human capital becomes strong when the focus turns to the school attainment and imparting quality¹ rather than higher education, this shows that the extent of education doesn't have a positive influence on the employment growth, hence in terms of general human capital the level of education has weaker obligation to attain employment or being marketable in labor force. It could be found that, in our national culture the level of education has not been given a significant importance due to the power orientation in relation to employment. Moreover, the highest degree which is PhD is mostly marketed in academia rather than in industry, hence majority of people have low confluence towards the extent of higher education. In Pakistan the primary & secondary education is lowest in the region.



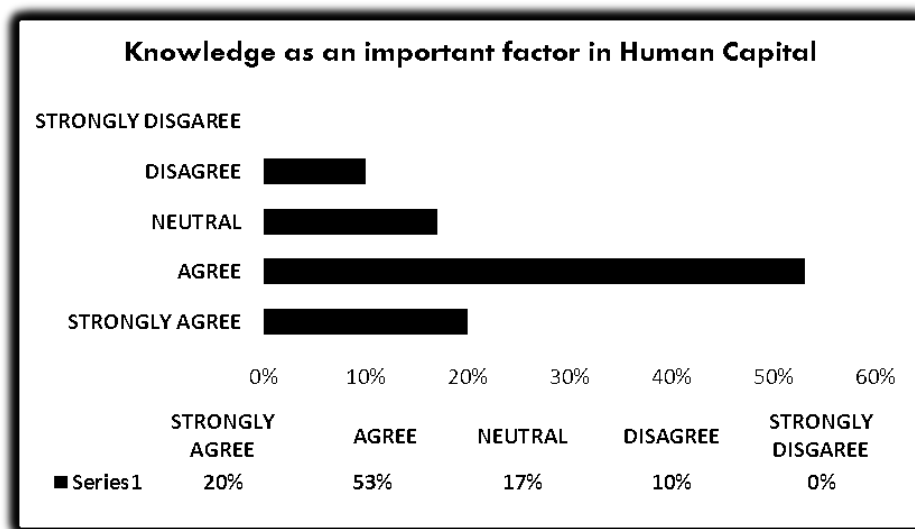
Education's incidence on employment

n=60



1. **Hanushek, Eric. (2013), *Economic Growth in Developing Countries: The Role of Human Capital*, Stanford University.**

There is strong disagreement that education reduces the incidence of unemployment as 37% of sample disagrees with the notion. This disagreement might be due to the reasons peculiar to Pakistani society, where the sole criterion for getting the employment is not education. The respondents might be of the view that increased levels of education is fostering unemployment rather than increasing prospects of the employment. As a matter of fact due to absence of effective Human Resources Planning the demand and supply principle is not followed in Pakistan where unchecked number of graduates, in professional and non-professional areas come out on yearly basis and hence still couldn't find the suitable employment, it could be due to the political interference and influence which is needed to get a proper employment. Apart from political leverage, the culture of giving bribe is rampant in Pakistan which further aggravated the employment prospects. Hence, as the data suggests only having education doesn't necessarily ensures the lowering of unemployment until the cultural ingredients such as political back up and/or bribe is made handy to get the employment. According to the survey, the unemployment has shown an increase from 5.9% in 1998 to 7.8% in 2008 in Pakistan. ¹



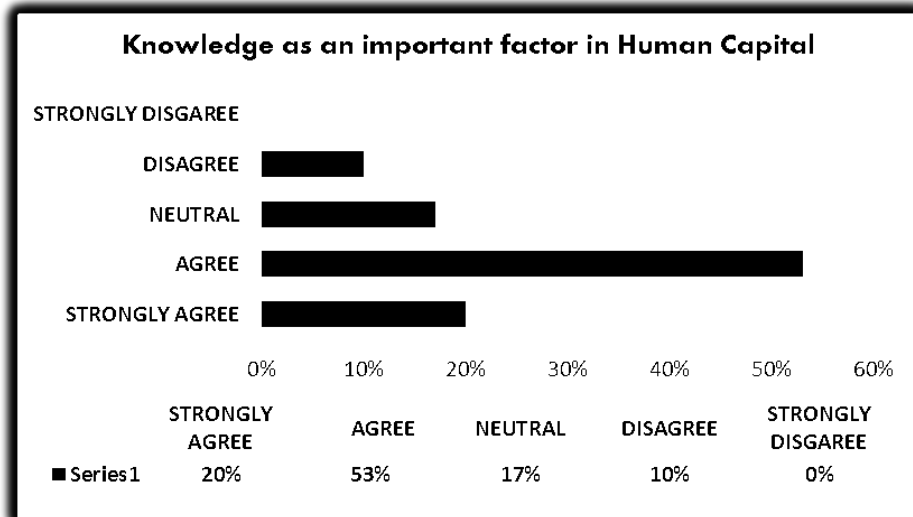
Education's role in economics

n=60

There is strong agreement that education helps in increasing the economic activities, by bolstering the economic growth. It could be deduced from the data that the education helps in accelerating the industrial and non-industrial output, as the education affords the intellectual prowess which helps in devising new visions and carving out new strategies. Education promotes the intellectual acquisitions and creates an environment of completion which promotes the economic acceleration and may lead to ever-increasing employment opportunities.



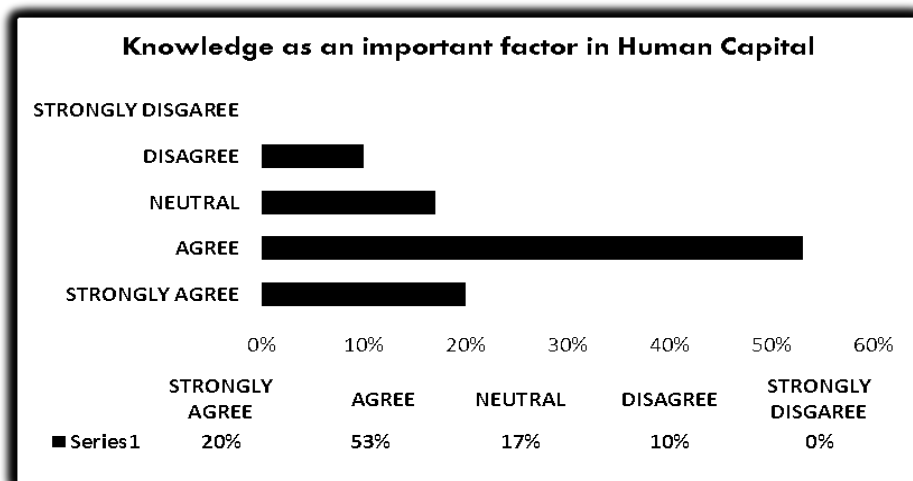
1. Mahmood, Akhtar & Idress, *Causes of Unemployment among the Educated Segments in Peshawar Division, Pakistan. A Statistical Study*. Sarhad J. Agric. Vol.27, No.1, 2011



Education's incidence on employability

n=60

There is strong agreement on the attainment of basic education rather than higher education, this shows that the extent of education doesn't have a positive influence on employability, hence in terms of general human capital the level of education has weaker obligation to attain employment or being marketable in the labor force. It could be further found that, in Pakistan's national culture the level of education has not given a significant importance due to the power orientation in relation to employment. Moreover, the highest degree which is PhD is mostly marketed into academia rather than industry, hence majority of people have low confluence towards extent of education.

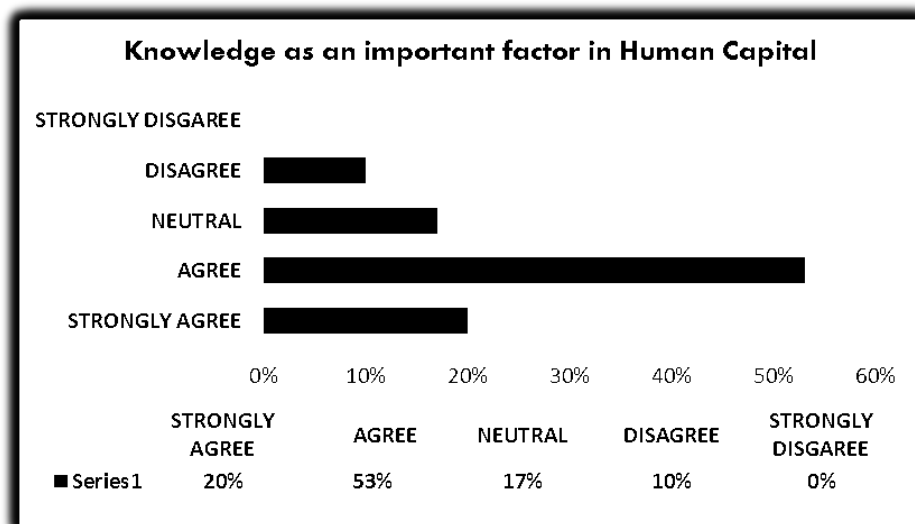


Internship programs factor in employment chances

n=60



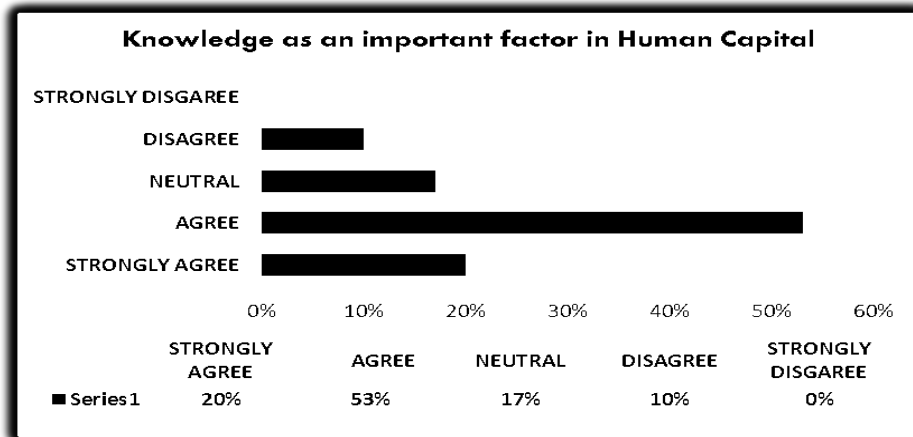
There is strong evidence that the Internship programs foster the chances of employment. It could be deduced that the initiatives are devised or designed to utilize the current workforce by implementing the internships or placement programs at different levels and into different industries. This would create an opportunity for a workforce to gain important experience and then using this experience to make themselves more marketable. Hence provision for internship programs at the higher education institutes, organizations and industries affords the prospective Human Resource a very effective work experience which may render useful for them to get good employment opportunities, therefore the systematic internships programs should be hammered out to promote specific human capital tendencies which could ultimately reduce the incidence of unemployment.



Trainings are skills accumulation

n=60

There strong link between the training and skill accumulation as the evidence suggests, the trainings imparted through formal meaning include on the job as well off the job. The continuous mechanism in the organization whether public or private require provisions for the training, as this would enrich the academic, vocational, technical and interpersonal skills of the workforce. Frequent workshops and seminars cold also be incorporated in order to create the environment of learning. The management literature strongly validates the co-relation of organizational development directly proportional to individual development and this could only be realized by effective means of trainings. The evidence further suggests that with growing training programs and skills accumulation the more outlets for the employment are created, and the individual market worth could also get enhanced which would assist in the long for work acquiring and the job retention by the prospective employer.



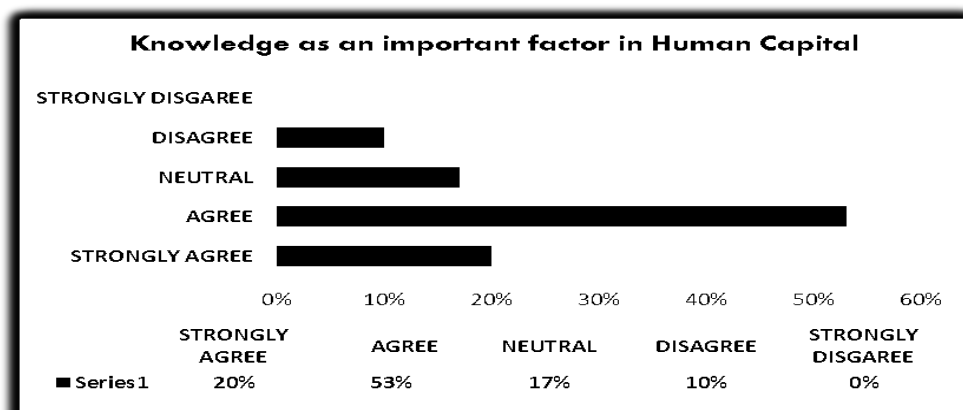
Training & Human Development

n=60

There is overwhelming evidence that training has implications for human development. The countries which are fostering the climate of extensive trainings in the organizational frameworks are deriving far more output than the organizations which are not paying enough attention on the effective trainings. Human Resource development enhances the structural vitality of the organizations and could lead to the individual development. It is therefore emphasized that comprehensive network of internship should be devised within the educational institutors in order to boost up the Human capabilities and that could afford than the hands on working experience which could lead to the tangible results.

In Pakistan there is acute dearth of internship program which may otherwise help to ameliorate the stagnated human factor and could be a handy source for ventilating the innate capacities of the human resources. However, there is substantial amount of disagreement (20%), this shows that training is not the only construct needs to be focused rather than there should be an element of specific human capital such as experience which counts towards the productivity and consequently economic growth. Hence, it could be found that there should be a blend of general and specific human capital.

Impact of Specific Human Capital (Experience) on employment growth



Work/task experience's bearing on output

n=60

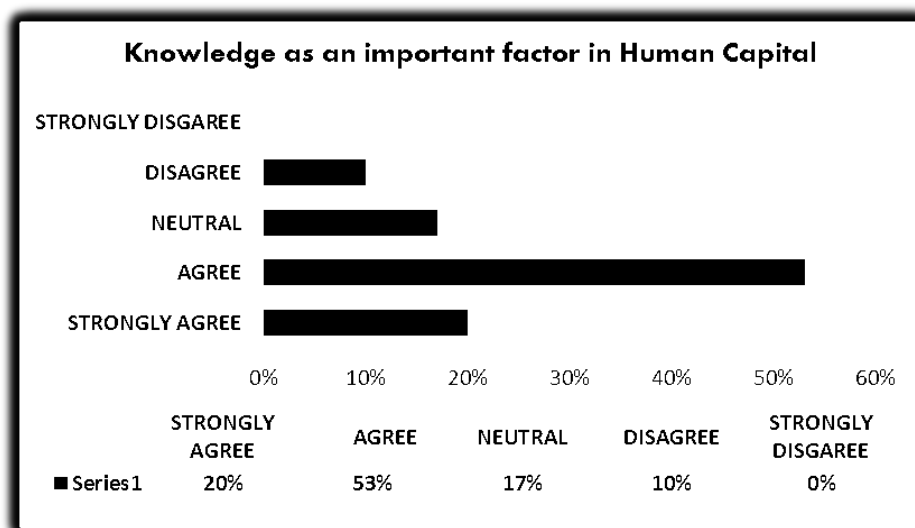


Analysis:

The evidence indicates that task-based or work experience has the positive bearing on the human capital productivity. Human capital having mere trainings and education is not a guarantee for being the productive worker. The research supports the idea of having practical work experience as it affords the human capital to handle day to day execution of work in the organizations. Small youth projects, internship programs and hands on technical experience pays good dividends when it comes to search for work and after adjusting in the workforce. However, considerable respondents have the other idea as to non-relevancy of the task-based work and the productivity.

Such responses may elicit the idea that other components of human capital are more important for productivity such as trainings and advance education instead mere having task based experience. Firm's core competences or competitive advantage is induced by the investment of human capital entailed with value creating potential ¹

1. **Lepak & Snell (1999), *The Human Resource Architecture*. Academy of Management Review, 24, 31-48.**

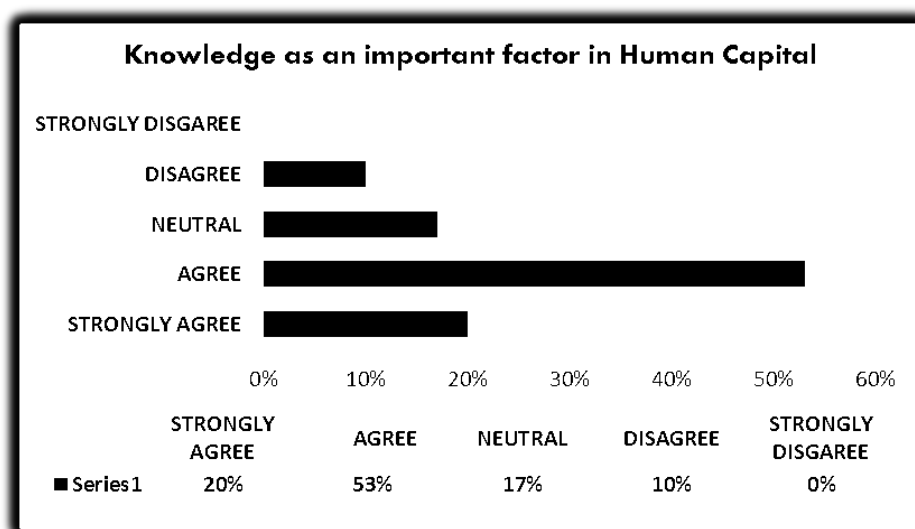


Analysis:

There is strong evidence that experience leads to the more competencies in executing the day to day work. The years spent on the particular work could lead to the expert level and which would be beneficial to the individual as well as to the organizations. This research substitute the observation that joblessness amongst the most experience worker is unfounded, as the experience affords the worker required maturity and accustom it with the culture and the



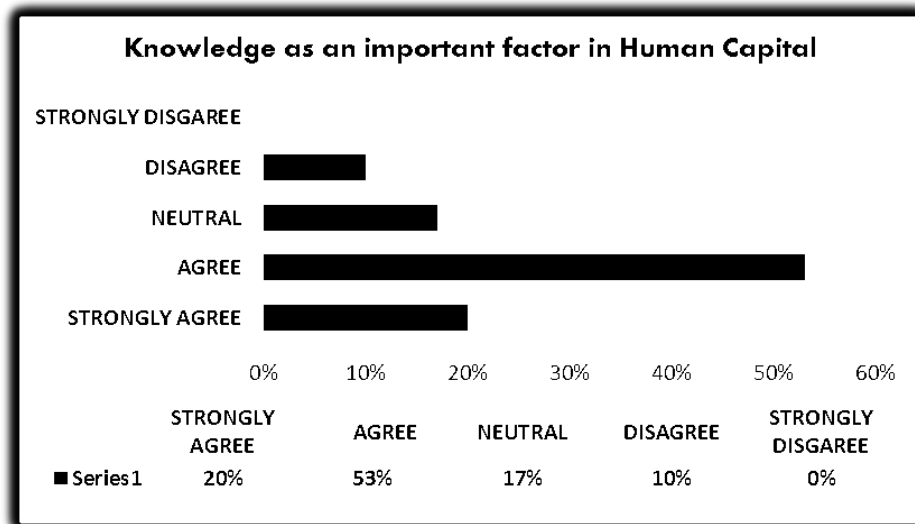
professional norms of the work setting hence it leads to the higher levels of competency. On the other 20% of respondents are of the view that experience doesn't necessary leads to the competency, this could due to the fact that in there apart from experience the other factors like advance education and trainings being part of general human capital are also needed to compliment experience which could than lead to the required competency levels.



Diversity's impact on Productivity & Employment n=60

Analysis:

There is strong evidence that the diversification of the work experience leads to the productivity and which could in consequence leads to the greater chances of employability. The evidence substantiates the observation that monotony of nature of work leads to the boredom and hence may lead to the decline levels of productivity. As in Japan they apply the system 'Job Rotation' which readily affords the human resources to get accustom to the all segments of work place and hence avoids the boredom and afford affective means of diversification. The diversification of work affirms implied motivation which could then be translated into viable human capital. The combination different types of training programs, rotation amongst various segments of the work place would be sufficient to develop the streak of productivity and helps the worker to understand multi-risk venture and might be helpful in greater prospects of promotion within the organization and effective absorption without the organization.



Skills & experience's impact on wage increase n=60

Analysis

There is strong evidence which agrees that the workers skills and experiences lead to the wage increase. The experience earned during the work setting and the skills accumulated through trainings have in fact turns the human capital into asset and that professional enrichment finally leads to the ever increasing levels of wages and salaries. The top professionals are recognized by the earnings they have from the work settings. One of the reasons as the evidence suggests for the low salaries and meager wage is due to the non-technical know how on the part of the workers and furthermore lack of relevant experience, with absence of these two important ingredients the worker would remain at the lowest of earning cadres and which could only be improved once the worker acquire effective skills coupled with work setting experience.

The data strengthens the observation made by Salamon, (1991), that the investment of human capital was the primary element to raise individuals' wages compared to the quantitative input of other components such as land, financial capital, and labor force

Key findings:

- Research reveals that employment opportunities depends on effective use of human capital, and this could be achieved by the simple demand and supply principle of economics, whereby the number of prospective workers in particular area of employment should not exceed the number of demand, it would radically reduce the incidence of unemployment.
- No effective Human Resources policy exists in Pakistan since 1947; hence it is the need of the hour to have a viable Human Resource Policy to cater the needs of public



and private sector human work force needs. The HR policy should reduce the gap of technically qualified workers and the educated people coming out of the academia.

- The Universities and technical institutes are the important source of providing the general as well as specific human capital.
- It is found that training has the positive relation with the greater prospects of getting productive human resource.
- It has been found that basic education rather than higher education is the prime factor in preparing the productive human resources.
- The multiplicity or diversity of work experience is asset for workforce, diversity leads to greater opportunities in labor market.
- The research reveals that task-based or specific human capital is more readily absorbed than the mere educated/ general human capital.
- Internships have positive co-relation with the producing effective human resource as Internships prepare the future labor by interfacing Industry with academia.
- It is also found that whether it is the increase of general or specific human capital, there should be an urgency to develop customized (need based) skills and competencies to cater the needs of certain industries. It is further transpired that the blend of general (education) and specific (training & experience) humancapital ensures that positive growth of employment, as they complement each other.
- It mainly due to non-application of Human Resources Planning (HRP) in Pakistan that we witness the overwhelming number of jobless people.

Conclusions:

- This research concludes with the understanding of Human Capital's impact on the prospects of employment and economic growth.
- The study is within the context of Pakistan and helps in bridging the gap of non-availability of Human Capital data within Pakistani perspective.
- The uniqueness of this research is driven from the facts that empirical data and findings are drawn from the blend of general as well specific human capital.



Recommendations/Suggestions:

The study leads to the following recommendations & suggestions for the policy making and implementation in areas of General & Specific Human Capital:

- As no effective policy exist in Pakistan to develop and utilize human capital for employment growth, it is necessary that the federal & provincial government devise comprehensive plans to engage the educated & trained people in the main stream labor force.
- Though the Universities are important source of general human capital, there is acute need for Institutes where the technical, task-based specific human capital could be developed to match the growing need of industrial sector.
- Internships must be offered to prospective employees and students to get first hand practical knowledge, it culminates in employment boom. Internship programs are good source for blending the general and specific human capital.
- Effective education policy is required in Pakistan to bolster Human Capital, as education is the most viable mechanism for developing human capital, it is therefore necessary that Universal Education System may be introduced to develop indigenous human capital.
- The Public and Private sector enterprises in Pakistan should impart trainings programs as a 'Competitive Advantage' as was done by Japan and China, so that it could catch up with the growing demands of globalization which stresses on the availability of update workforce.



References:

- Alan, K. M. A., Altman, Y., & Roussel, J. (2008). *Employee Training Needs and Perceived Value of Training in the Pearl River Delta of China: A Human Capital Development Approach*. Journal of European Industrial Training, 32(1), 19-31.
- Ali, Chaudhry, & Farooq (2012), *Human Capital Formation and Economic Growth in Pakistan*. Pakistan Journal of Social Sciences (PJSS) Vol. 32, No. 1, pp.229-240.
- Becker, G. S. (1976a). *Human Capital*. New York: National Bureau of Economic Research.
- Becker, G. S. (1976b). *The Economic Approach to Human Behavior*. Chicago.
- Fowler, Floyd. (2008). *Survey research methods*. London: Sage Publishers.
- Garavan, T. N., et al. (2001). *Human Capital Accumulation: The Role of Human Resource Development*, Journal of European Industrial Training, 25(2), 48-68.
- Graff, M. (1995), *Education and technical progress as determinants economic development: a theoretical and empirical investigation*. Heidelberg: Physica-Verlag.
- Hanushek, Eric. (2013), *Economic Growth in Developing Countries: The Role of Human Capital*, Stanford University.
- Husain Ishrat, (2005), *Education, Employment, and Economic development in Pakistan*. Inaugural Address delivered at the Conference on Education held at Woodrow Wilson Center, Washington D.C.
- Lepak & Snell, (1999). *The Human Resource Architecture: Toward a Theory of Human Capital Allocation and Development*. Academy of Management Review, 24, 31-48.
- Lucas, R., (1988), *On the Mechanics of Economic Development*, Journal of Monetary Economics, 22, 3-42.
- Mahmood, Akhtar & Idress, (2011), *Causes of Unemployment among the Educated Segments in Peshawar Division, Pakistan. A Statistical Study*. Sarhad J. Agric. Vol.27, No.1,
- Nelson, R., Phelps, E., (1966). *Investment in humans, technological diffusion, and economic growth*. American Economic Review: Papers and Proceedings 51 (2), 69-75
- Rastogi, P. N. (2002). *Knowledge Management and Intellectual Capital as a Paradigm of Value Creation*. Human Systems Management, 21(4). 229-240.



- Romer, Paul M., (1990) *Human capital and growth: Theory and evidence*, *Carnegie-Rochester Conference Series on Public Policy*, Elsevier, vol. 32(1), pages 251-286
- Salamon, L. M. (1991). *Human Capital and America's Future*. Baltimore: Johns Hopkins University.
- Schultz, T. W. (1961). *Investment in Human Capital*. *American Economic Review*, 51, 1-17.
- Woodhall, M. (2001). *Human capital: educational aspects*, *International Encyclopedia of the Social & Behavioral Sciences*.