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Non-Cognitive Skills and Employability:

Evidence from the States of India

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Abstract

India is a developing country with huge potential for the residents in various aspects of the economy. However, Indian youth remains majorly unemployed or informally employed where it fails to enjoy the benefits of formal employment perks. These outcomes have often been singularly linked to various educational indicators, such as number of schooling years, level of literacy and relevant language and technical skills. However, despite doing fairly well on these indicators, Indian states have been performing poorly in the context of labour market outcomes. The indicators highlight that the majority of the labour force in the country is not employable even after a graduate degree and thus fails to enjoy the perks and incentives of formal employment. The paper, thus, aims to pivot from the traditional link between skills and employability and employ a separate approach to view labour market outcomes as a product of cognitive skills alongside non cognitive skills in the context of a developing country like India.

Keywords: Non cognitive Skills, Labour market, Employability

JEL Code: J24, J21

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1. Introduction

Non cognitive skills are defined as patterns of thoughts, feelings and individual characteristics that go beyond functionalities of the cognitive brain. These skills cover a range of abilities such as ability to perform in teams, conscientiousness, perseverance and grit. Despite their importance in an evolving economy, these traits have been excluded from employment indicators in a country. Traditionally, labour market outcomes such as prospects of future jobs, wages and level of employment have been assessed through the impact of abilities that can be learnt in schooling. education. Particularly, skills in subjects like mathematics, science, and English have been used as the benchmark, particularly for recruitment processes in individual firms. At a macro level, literacy rates and average years of schooling in an economy are judgment parameters for employability in that country.

These skills can be defined as cognitive skills and a good starting point to define these skills is to introduce the American Psychological Association's (2007) definition of cognition: "all forms of knowing and awareness, such as perceiving, conceiving, remembering, reasoning, judging, imagining and problem solving." More simply, one can define cognitive skills as the knowledge one has acquired, and one's ability to learn new knowledge (Glewwe et al, 2017). The established positive link between these skills and labour market indicators have been studied and researched by several economists. It has been indicated that years of schooling increases an individual's opportunities for employment only if it generates skills that have returns in the labor market. This has been proven right particularly in developing countries with suboptimal livelihood opportunities and an abundance of cheap and low skilled labour. In this context, math, science and technical skills become pivotal to secure a decent job for any individual. This has often led to over emphasis on the cognitive skills even at the primary school level.

However, as the global economy transitions to more automated processes and collaboration driven outcomes, employers are increasingly looking beyond academic grades and qualifications to find suitable fit for their enterprises. Traits and characteristics of individuals that foster effective communication between colleagues at the workplace and individual patterns of thoughts and feelings to foster efficient coordination and motivate people are gaining more importance by the day. Therefore, research and studies across are beginning to realize the importance of such skills and are actively including these characteristics in the assessment of labour market outcomes.

Given this backdrop, the objective of the paper is to understand the role of non-cognitive skills in employability in a developing country like India and further enable a discourse for the inclusion of such traits and characteristics in popular assessments of labour market outcomes. The next few sections will delve into understanding non-cognitive skills and what traits and characteristics encompass the term, further, the paper would assess the understanding of these skills in the Indian labour market with an emphasis on how the enhancement of these skills can be catalytic forces in

realising significant employment potential. In addition to this, the paper would conclude by providing certain policy suggestions and recommendations for the inclusion of these parameters when determining the labour market outcomes and further developing these skills to enhance these outcomes for a resilient economic growth of the country.

2. Non-Cognitive Skills- What are they and why are the important?

Non cognitive skills have recently gained traction in the assessment of labour productivity. (Almuld et al, 2011). As mentioned above, these are individual traits, characteristics, and patterns of thoughts or feelings that impact social interactions among individuals. (Borghans, et al, 2008). These skills matter for an individual's own sake, but they also are significant for individuals we interact with and form alliances with. In particular, non-cognitive skills complement cognitive processes and are essential for the further enhancement of the latter. Therefore, it has been noted that boosting non-cognitive skills in individuals can help further to develop their technical, language and problem-solving skills.

The Big Five taxonomy of personality traits has been developed by psychologists to understand various personality traits of individuals. The assessment aims to understand five traits, viz, openness, conscientiousness, extraversion, agreeableness and neuroticism or emotional stability (John and Srivastava, 2009). Conscientiousness and emotional stability, in particular, are likely to be highly corelated with any job performance and associated incentives. (Almlund et al, 2011)

Several researches across disciplines and subjects has indicated that these skills are key for individuals to attain higher educational qualifications and a fruitful transition to adulthood. Skills such as grit, problem solving, social skills, and self-control have been linked to educational attainment and workforce success. (Kautz, T. D. et al. 2014). Furthermore, in a global economy that continues to evolve and rely on effective coordination and collaboration of efforts, the aforementioned skills become pivotal to foster productive outcomes at the micro and macro level. Under this context, non-cognitive skills have been growing in demand for the employers. Especially, in the advent of covid-19 pandemic, with employees scattered over remote locations, the need to communicates and maintain the motivation to work has been a challenge. These instances have further highlighted the importance of non-cognitive skills and why companies are beginning to include them in the recruitment and rewarding processes.

3. Non-Cognitive Skills and Employment Opportunities

Evidence of non-cognitive skills impacting the labour market outcomes is not as abundant as that of cognitive skills on indicators highlighting the scope of employment of individuals in a developing country[1]. The limited research in the western developed world indicates that these characteristics and skills matter across a wider spectrum of workers especially those at the bottom of the wage distribution (Lindqvist and Vestman, 2011).

[1] (See Goldsmith et al. Darity (1997) for US evidence and Bowles, Gintis, and Osborne (2001) for a literature review).

Furthermore, studies workers (Almlund et al., 2011; Segal, forthcoming), have indicated that self-esteem, solution-oriented work performance, personal control, motivation to work and leadership skills have seemingly a positive impact on employability of individuals and further associated renumeration. Heckman, Stixrud, and Urzua (2006) estimate an 11.2% return to one unite increase in standard deviation of noncognitive skills in the US, and note that these skills predict adult wages about as well as cognitive skills. In contrast to this, Personal efficacy, childhood aggression, childhood withdrawal and disciplinary issues in schooling years are negatively associated with labour market outcomes of individuals (Glewwe et al, 2017). The magnitudes of the impact of non-cognitive skills across studies vary widely, ranging from a 15% increase in wages associated with a one standard deviation increase in personal control (Dunifon and Duncan 1998) to a 3% increase in wages associated with a one standard deviation decrease in childhood withdrawal (Groves 2005). A few papers find that social sensitivity, impulsiveness, culture, maturity, leadership, executive ability, industriousness, and perseverance are jointly associated with occupational status, in addition to sociability, friendliness and thoughtfulness (Noray, 2020).

Furthermore, Findings from Heckman et al. (2006), Willis and Rosen (1979), Cunha and Heckman (2007) and Cunha et al. (2010), can be concluded to highlight the following: (i) non-cognitive skills and cognitive skills likely explain similar amounts of the variation in earnings and (ii) non-cognitive and cognitive skills are complimentary in producing labor market success. This correlation between the labour market and employment opportunities did not exist in the 1980s and 90s. However, with a transition in the work culture, global outcomes and priorities, the demand for skills beyond language and technical abilities have risen. This rise in demand has been estimated at 16 percent, while a similar demand for cognitive skills in subjects like mathematics has witnessed a rise of merely five percent.

4. Non cognitive skills in the Indian labor market

The Indian labour force is concentrated in the informal employment with little to no incentives and social security. It has been highlighted that a little above 35 percent (Sharma, 2020) of the recruiters feel that the candidates lack the relevant skills and hence are deemed unsuitable for the job outcomes. Studies have indicated that significant populations of Indian graduates are unemployable owing to the mismatching of the existing skill set and the desired skill set.

Skills and abilities specific to the employment outcomes in a firm are pivotal but not sufficient. To secure employment, traits including effective communication, problem solving abilities and critical thinking are considered non-negotiable. However, of late, basic leadership skills, multitasking, and ability to produce results in a high pressure environment, collaborating at group tasks and being aware and confident of one’s skills and abilities are gaining more attention. Since, the focus has been on developing the former set of skills, there persists a gap between the desired skill set for employment and skill set acquired by job seekers.

This gap between the skill sets can be attributed to the continuous evolution of economies and the associated labour markets. In the context of India, the employment market has shifted to a completely different tangent from the previous decade. The developments and

interventions in technology across industries have opened various job opportunities. In this scenario, socio-economical talents and skills are considered to be intangible assets for any employer. The percentage of companies investing in these assets is increasing day by day. Companies want qualified workforce; however, over 90% of individuals wishing to enter the labour force. Even in opportunities where cognitive skills are the guiding force, technical and language skills along with exemplary academic records only prove sufficient for candidates to enter the labour force. With progression in an employee's employment path, the desired and required skills to achieve the outcomes pivot. It is imperative to note that as an employee moves ahead and the responsibilities and outcomes to achieve evolve, the skills set requirement change from just being technical to including socioeconomical and non-cognitive skills.

Recruiters are of the view that these skills include but are not limited to (i) Communication Skills, (ii) Language Capabilities, (iii) Emotional Intelligence, (iv) Decision Making, (v) Problem Solving, (vi) Adaptability, (vii) Negotiation Skills, (viii) Critical Thinking and (ix) Social Skills, among others. The career levels and the anticipated skill sets are highlighted in the table below.

Employment Levels	Desired Skills
Entry-Level Jobs (First time job seekers: Assistants, Associates etc.)	non-verbal communication, adaptability, critical thinking, ability to take feedback, goal-orientation, ability to take initiative, passion for work, think outside the box. Being punctual, being a team player or a fast learner
Mid-Level	managing interpersonal skills, effective communication, negotiations, decision taking ability, networking, delegation, motivation, selling skills, customer relationships etc.
Leadership Level	adaptability, flexibility, risk taking ability, building effective teams, empathy, active listening, resilience, time management amongst many others.

Source: Author's Assessment

This is further corroborated by the results of a study (Yamauchi et al, 2018) conducted by the International Food Policy Research Institute (IFPRI). The results of this study highlight that employers tend to prefer job seekers who perform fairly well on the Big Five personality test.[2] In addition to this, the findings suggest a preference towards candidates with traits including organized disposition, calm, and imaginative though processes.

[2] The big five personality traits are the best accepted and most commonly used model of personality in academic psychology. If you take a college course in personality psychology, this is what you will learn about. The big five come from the statistical study of responses to personality items. Using a technique called factor analysis researchers can look at the responses of people to hundreds of personality items and ask the question "what is the best was to summarize an individual?". This has been done with many samples from all over the world and the general result is that, while there seem to be unlimited personality variables, five stands out from the pack in terms of explaining a lot of a person's answers to questions about their personality: extraversion, neuroticism, agreeableness, conscientiousness and openness to experience. The big-five are not associated with any particular test, a variety of measures have been developed to measure them. This test uses the Big-Five Factor Markers from the International Personality Item Pool, developed by Goldberg (1992).

Therefore it can be noted that, at industry level, Indian recruiters and employers are actively aiming to investigate the relevant non-cognitive skills in the candidates. However, these skills remain excluded from the popular labour outcome discourses at the macro level. It is imperative to formulate methods to recognize the importance of these skills for employment prospects of individuals in a country and therefore, include them in the measurement of employability, particularly in the context of a developing economy like India.

5. Conclusion and way forward

The paper notes the significance and relevance of non-cognitive skills for ensuring efficient outcomes in employment outcomes and future job prospects. However, empirical data and research on the same is limited, especially in the context of emerging economies. For the consideration of these skills in micro and macro and macro analysis of employability and labour market analysis, identifying the relevant and necessary skillsets for these outcomes, in alignment with the economic scenario in the country is imperative. Further, household surveys to measure these skills and collection of panel data are required.

Secondly, there is a need to inculcate these skills at the foundation level. Aiming to include these skillsets in formal educational methods is essential to teach school going children the importance of such skills and also help them acquire the same.

It is undeniable that both soft skills and technical skills are pivotal for success and need constant development. The design of a comprehensive model of educational outcomes and the study of their associations with the different school inputs are expected to uncover interesting features of the educational production process. Consequently, and building on all the existing knowledge on the production of education, these analyses can help to shed some light on fundamental knowledge for educational research: to better understand the educational process. The empirical findings arising from the study can be useful for informing policymakers and school practitioners and guiding decision making, by offering complementary frameworks that more accurately represent the educational process. Finally, the results may be useful for designing and evaluating educational interventions that are efficient and effective in producing higher quality and quantity of educational outcomes, by incorporating the assessment of non-cognitive skills into the interventions' expected outcomes. Indirectly, this could also stimulate the creation of newer theoretical frameworks, statistical methods and more comprehensive empirical sources for the study of education.

Considerations to begin in-house training for these skills and efforts to design comprehensive framework to inculcate creativity, emotional intelligence, and above all people management as the most critical skills required in the workplace.

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