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EMPLOYABILITY OF NEW GRADUATES IN SRI LANKA:
Implications for Policy Development

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EMPLOYABILITY OF NEW GRADUATES IN SRI LANKA:

Implications for Policy Development[1]

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Abstract

The aim of this study was to identify the determinants of employability of new graduates in Sri Lanka. A wide-ranging review of literature on graduate employability was followed by an analysis of the country situation,using descriptive statistics and Binary Logistic regression. Primary data, being the main source of data, was collected through a questionnaire survey conducted to identify the employability characteristics of the graduates. The study found that the degree type, soft skills and social capital, efforts made by graduates in applying for jobs, and especially, the additional professional qualifications that students earned during the university career were the significant determinants of graduate employability in Sri Lanka. Furthermore, together with the findings of previous studies, this research provides policy implications for development of higher education in Sri Lanka.

Keywords: Graduate employability, hard skills, soft skills, social capital, higher education

1. INTRODUCTION

1.1. Background

Employability of graduates produced by the Higher Educational Institutions (HEIs) in developing countries has been a major issue in the field of higher education related labor market. This has been exaggerated with the decline of the role of government in the provision of employment as a national responsibility. Expansion of the private sector with the simultaneous contraction of the public sector has strengthened the market forces in the labor market as well. The graduates produced by the university system have to find jobs competitively in the labor market due to this

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trendthough the government involves in this process to a limited extent.Meanwhile, the problem of unemployment among graduates has been continuously inflating.

Sri Lanka annually produces nearly 25,000graduatesin bachelor's degreefrom all HEIs of the countryin different fields of study. This numberis being increased annuallydue to the increase inthe annual student intake to higher education from those who are qualified from the General Certificate of Education Advanced Level (GCE A/L) Examination. The strength of the remaining higher education system is such that both the public and private sector HEIs are not capable of absorbing even aquarter of the annually qualified students. However, the economy is still not capable of absorbing these graduates as employees either through the mechanism of market forces or the direct involvement of the Government. The problem of unemployment could have been more severe if at least the majority of qualified students were annually recruited to the HEIs.

The status quo of the graduate unemployment in Sri Lanka shows that the seriousness of the problem varies between the field of study, individual qualities of graduates,etc. Graduates from the faculties of Medicine are still recruited to the public health system of the country leaving no possibility for unemployment. They can also earn an additional income from private practice after the government duty hours. Graduates from the fields of Engineering and Managementalso do not face a big problem in the labor market. However, while all other graduates have to face competitive conditions in the labor market, the problem is severe for the graduates from humanities and social sciences.

Due to the remaining situation of graduate unemployment, HEIs are highly criticized for their inability to produce employable graduates. Especially, politicians andemployers are the main critics of the HEIs with the academic staff being subjected to criticism for their lack of ability to produce 'employable' graduates.As aresponse, HEIs of the country have taken steps to change the out- put of their respective institutions, i.e. the production of graduates. The new changes include curricula review and development, improving of soft skills of students,provision of internship training, improving English and Information Technology (IT), etc.The projects related to the improvement of the quality of graduates are funded by the Government with the help of international donors and funding agencies such as the World Bank.Steps are being taken in order to improve the skills needed to be employed in the competitive labor market. This process of increasing the skills has been carried out by the HEIs in Sri Lanka during the last eight (08) yearsunder the recently introduced semester-based credits system. The graduates who were trained under the new curricular and the training system combined with the new skill generation attempts have released into the labor market

during the last four years. This study illuminates the current position in the graduate labor marketin Sri Lanka with a view to derive implications for further development of graduate training in the country.

1.2. The Problem statement

Employability attributes can be perceived in two main forms viz., 'hard skills' and 'soft skills'. Recently, revolutionary attempts have been made in order to improve soft skills of undergraduates.This process was accompanied by review and development of curricula, provision of soft skills such as Information technology (IT), communication skills, management skills, etc. under the semester-based credits system, which was recently introduced instead of the annual examination system that existed before.The study time of students may have to be reallocated from improving hard-skills to improving soft-skills. This means that the existing blend of hard and soft skills of those who have recently graduated from HIEs have not been satisfactory vis-a-vis employability. The literature revealed that there is a controversy about what should be included in higher education when it focuses on the employability of graduates. Different studies have found different determinants of employability varying among countries depending on their socio-economic characteristics. Therefore, this study attempts to investigate the factors that determine the employability of new graduates produced by the HEIs in Sri Lanka.

1.3. Objectives

The aim of the study is to identify the determinants of the employability of new graduates in Sri Lanka.In order to serve the aim, the study sets the following three specific objectives:

1. To explore the literature on graduate employability toidentifythe kinds of soft skills needed in undergraduatetraining.
2. To distinguish between the degree types; Arts, Management and Science, in the determination of employability of degree holders.
3. To identify the significance of soft skills and social capital in comparison to hard skillsfrom the point of view of employability.
4. To identify the significance of professional qualifications as an additional qualification necessaryto be employed in the labor market.

2. HIGHER EDUCATION SETTING IN SRI LANKA AND A REVIEW OF LITERATURE ON EMPLOYABILITY SKILLS

2.1. A brief review of higher education in Sri Lanka

The supply of higher education in Sri Lanka is under the monopoly of the public sector since its inception. The number of universities increased from one (01) in 1948 to 17 by 2014. The recruitment of students to these universities is handled by the University Grants Commission (UGC) based on the principle of filling enrollment spaces according to the ascending order of qualifications obtained by the students at their G.C.E. Advanced Level (A/L) Examination with some concerns on districts with low level education facilities. However, during the last two decades there is a trend of establishing higher education institutes affiliated to foreign universities. Majority of students who enroll in such institutions are those who could not obtain sufficiently high marks at the G.C.E. A/L Examination to enter the public sector universities.

The distribution of universities in Sri Lanka is fairly good even if the concentration is somewhat high in the Colombo district. There is no tuition fee that is charged from the students in any of the public sector universities for their undergraduates (Bachelor's degrees) in any field of study. However, a very low rate of tuition fee is charged from the students at postgraduate diploma and degree levels.

Conceptually, it is difficult to define the 'market for education' in contrast to other markets. In other markets all who make an effective demand are provided with goods or services. On the contrary, only the qualified students are provided with supply.The demand for higher education can be defined as the number students who enroll in higher education. The supply of higher education is defined as thetotal number of enrollment spaces or vacancies available within the entire higher education system of a country (Chandrakumara, 2012).

In Sri Lanka, the supply of higher education has been continuously increased since independence in 1948.The free education act enacted in 1947 and implemented since 1948 largelyenhanced the demand for education in the country. This process was strongly backed by the compulsory education law enacted for the children under the age rangingfrom 5 to 16 years. Increased enrollments in primary and secondary education produced qualified students who can demand for higher education. The expansion of the enrolment spaces of the country in higher education, which is on par with the admitted number of students, is shown in comparison to the qualified number of students in recent years in Table – 1.

Table– 1: Expansion of enrolment spaces in higher education

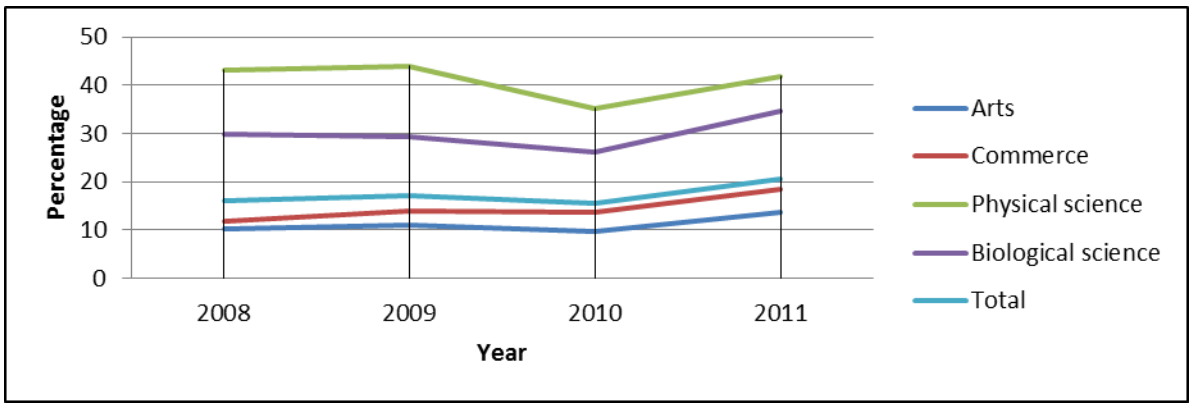
Stream	2008 (2008/2009)		2009 (2009/2010)		2010 (2010/2011)		2011 (2011/2012)	
	Qualified	Admitted	Qualified	Admitted	Qualified	Admitted	Qualified	Admitted
Arts	65,235	6,693	62,676	6,841	72,800	7,064	75,838	10,297
		(10.26)		(10.91)		(9.70)		(13.58)
Commerce	36,707	4,337	33,202	4,583	35,581	4,876	30.913	5,742
		(11.82)		(13.80)		(13.70)		(18.57)
Physical science	10,408	4,493	10,164	4467	12,657	4,455	13,340	5,581
		(43.17)		(43.95)		(35.20)		(41.84)
Biological science	17,886	53,23	19,242	5656	21,478	5,621	20,889	7,244
		(29.76)		(29.39)		(26.17)		(34.68)
Other	n.a	n.a.	-	-	-	-	431	44
								(10.21)
Total	130,236	20,846	125,284	21,547	142,516	22,016	141,411	28,908
		(16.01)		(17.20)		(15.45)		(20.44)

Note: Percentages are given in brackets.

Source: University Grants Commission, 2014.

The demand for higher education has been confined to the total number of vacancies available in the universities even if there are a large number of students who qualify for university admissions as shown in Figure – 2.

Figure – 1: Expansion in university admissions



Source: Author constructed.

2.2. A review of previous studies on graduate employability

Previous studies have identified important skills and traits that graduates should have for the attraction of the employers.This section summarizes the results of previous research in this regard.

Liling (n.a), conducting a research to identify the employer perception concerning the employability skills needed in the job market in the context of Chinese graduates, found that the four most important skills sought by employers were communication, learning ability, interpersonal ability and team work.In contrast, he found that new graduates are very poor at "problem solving and decision making", "personal management", "Team work" and "interpersonal ability". Barracloughet al. (2009) also conducted a research on 'Graduates' perspectives on the influence of higher education on their employability'. Based on the views of alumni, the study found that 'managing others' and 'using new technologies' were the skill areas identified by most graduates that they would have liked more opportunities in even if the study was too small to generalize the results. Furthermore, this study highlights the need to encourage students to recognize the transferable skills that they have gained in a non-academic environment. This finding brings to light that such recognition would be important for the students to identify the jobs that have a more employability opportunity for them.

Department of Business Innovation and Skills (2011) in London reveals that the University of Dundee has strived to improve the employability of graduates through innovative approaches. They developed a 'graduate skill award for their students and designed a criteria for measuring skills using eight skill indicators that include 'communication skill', 'Numerical', 'Information literacy and learning', 'Information technology','Interpersonal', 'Problem solving and planning', 'Reflection and response for own learning', 'Professional commercial awareness'.This means that any country or organization that train students should identify what skills are needed for them to be employed in the expected industries.

Ediagbonya and Juliet (2013) investigated the concept of employability of business education graduates using the human capital theory as the theoretical framework of the study. They used mean and standard deviation for each skill indicator and calculated the aggregate mean and the standard deviation as well. Accordingly, they could decide who and which study fields are high or low in employability skills. The study found that the employability of business education graduates was high while there was a significant difference in employability skills with sex. Furthermore, it found that there was a significant difference between employability skills and the field of study. This means that employability skills of graduates vary among the study field of study. According to the study, there is no problem in

employability skills for business education graduates. This study helps understand that the same effort or actions are not needed for all graduates or undergraduates who are studying in different fields.

A special community of young people has been formed across America named 4-H with the aim of learning leadership, citizenship, and life skills as they work in partnership with caring adults (http://www.extension.iastate.edu/4h/explore). This community helps develop skills of that would help them succeed and empower the youth. 4-H youth development, being a part of Iowa State University Extension, provides evidence to show that 4-H youth are competent, confident, caring, and connected , and shows a strong character. They also contribute more to their families and communities, and shows a higher performance in schools. In 1907, Jessie Field Shambaughand O.H. Benson had started using a three-leaf clover for the identity of boys and girls clubs. The three leaves were used for Head (to think and plan), Heart (to be kind true and sympathetic) and Hands (to be useful, helpful and skillful). Later, in 1911, Benson suggested another 'H' to stand for Health, symbolizing resistance to disease, enjoying life and creating efficiency and the clovers turned to be of four cloves with that suggestion.Therefore, this concept helps understand that skill development programs of universities should have a concern on the skills related to head, heart, hands and health when designing skill training programs.

European Centre for the Development of Vocational Training (2012), conducting a research on skill mismatch and the role of enterprise, reveals that there is a positive relationship between over-skilling and firm productivity. It reveals that overeducated individuals may receive a wage premium relative to appropriately educated colleagues in similar jobs and there is a value-added in upgrading the skills of the undereducated.Furthermore, it points out that even though modern organizations attach more value to 'soft skills' or 'key competencies' along with 'hard occupational skills', high performance is not the results of the quantity of training, but linking training to performance objectives. This suggestion is important when taking decisions on skill development programs of students in universities since the skills should be linked with the kinds of graduates, their study field and the jobs to be employed after graduation, etc.

Fan et al. (2005), through their study on soft skills, hard skills and black/white earning gap, examined the impacts of job skill types, cognitive or hard skills and non-cognitive or soft skills, on the black/white pay differentials and occupational choices. They mention that recent developments in research on discrimination have led to a semi-consensus that racial gap in skills is the main source of racial gap in earnings.The regression analysis based on the National Longitudinal Survey of Youth data revealed that the black/white pay differentials tend to be smaller for hard skill jobs than for non-hard skill jobs, and also smaller for non-soft skill jobs than for soft skill jobs. Furthermore, it

revealed that black white-collar workers do tend to select themselves into hard skill jobs or non-soft skill jobs. Their study implies that government policy should be targeted more on the elimination of the potential disadvantages that blacks may face in accumulating soft skills.

There are some other studies that have been done which are more similar to that of Fan and others. Carneiro and Masterov (2003 cited in Fan et al., 2005) have shown that based on a survey data there was sizeable non-cognitive skill gaps between blacks and whites. They also reveal that family background is responsible for most of these skill gaps between them in the US. Furthermore, Persico and Silverman (2001 cited in Fan et al., 2005) reveal that an individual from disadvantaged groups may acquire less soft skills due to his lower self-esteem and less participation in main-stream social activities in the periods of social development. These findings emphasize that racial (black or white) and family backgrounds as well as marginal groups in any society will lack soft skills particularly due to issues like backwardness that they may experience in the formative years of their life.

Heckman and Kautz (2012) summarize recent evidence on what achievement tests capture and how these tests relate to other measures of cognitive ability like Intelligence Quotient (IQ) and grades, etc. They point out that achievement tests do not adequately capture soft skills, personality traits, etc. and preferences valued in the labor market, in schools, etc. This paper shows that success in life depends on many traits, not just those measured by IQ, grades and standardized achievement tests. Evidence of the paper emphasizes that policy makers should not rely solely on achievement tests to monitor school performance and school systems, since personality traits are very important determinants for a successful life.

In the Paper Commissioned for the EFA Global Monitoring Report 2012, Adams (2011) emphasizes on the role of skills development in overcoming social disadvantage. The paper points out that most micro and small firms do not train workers in the same proportion as medium and large-sized firms. It further reveals that public providers also tend to ignore training for those in small firms due to many reasons. The paper very interestingly mentions that there is a tendency of governments to think of skills development as only taking place in schools and training centers even if larger investments in skills are created by households and businesses.This shows that skill development is not a something that is confined to the formal study centers like universities, it happens in households and businesses as well.

Bolden et al. (2003) presents a review of leadership theory and competency frameworks. They conclude it with the view that even as the leadership approach has its strengths; it leads to an individualistic notion of leadership and a relatively prescribed approach of leadership development. They added that the changing nature of work and society may demand new approaches that encourage a more collective and emergent view of leadership development and sharing the role of leader more widely within organizations. Skill development in universities also largely goes in line with the leadership theory. Hence, the conclusion of Bolden et al. help open the eyes of career guidance authorities, curriculum designers and the university staff to think about including collective kind of leadership skills when taking decisions concerning this issue.

Hsin and Xie (2012) have made an assessment on the relative roles of cognitive versus non-cognitive skills in mediating the effects of family Socio Economic Status (SES)on children's achievement using data from the early childhood longitudinal study-kindergarten cohort. They mention that non-cognitive skills are less predictive of later achievements and less affected by family SES.The study has reached important findings on the role of non-cognitive skills in intergenerational social mobility. Overall, they found that non-cognitive skills were weaker mediators of family SES effects than cognitive traits for two reasons. First, non-cognitive skills are less predictive of achievement outcomes than cognitive skills. Second, non-cognitive skills are also less affected by family SES than are cognitive skills. According to them, both types of skills positively affect later achievement and the effects of non-cognitive skills are about one-third the size of the effects of cognitive skills on later achievements. They further mention that these findings are relevant to the debates on the relative importance of 'soft' verses 'hard' skills for children's success. More interestingly, they mention that although many argue that soft skills are as important, if not more important, than hard skills as determinants of future success, they had found an opposite result which support the findings of some other researchers. However, the findings of this study are important to understand that we should not undermine the effects of hard skills on future achievement of children offering unnecessarily high attention on soft skills. Creating a balance between the two kinds of skills seem to be important.

Abduwani (2012) assessing the role of soft components of human capital theory explained the differences in soft skill endowment in Oman. Enveloping both quantitative and qualitative techniquesthe study highlights the importance of soft skills at the workplace. He found that soft skill orientation can vary between industries and banks had a better soft skill orientation than the oil companies where higher levels of capital investment, revenue and employee strength are associated with higher soft skill orientation. He also found that courses on communication, presentation and customer

care have enhanced the interpersonal skills while courses on situational analysis, emotional intelligence and time management have augmented situational skills.

Blades et al. (2012) summarized a brief review of literature in order to assess the potential for developing a new tool to support the evaluation of community and voluntary sector projects aiming to enhance young people's employability skills. In their review, they categorize and define soft employability skills on the basis of previous reviews. They divide soft employability skills into four main categories viz., 'personal', 'interpersonal', 'self-management' and 'initiative and delivery'.The skills which fall under 'Personal' category are 'confidence', 'self-esteem', 'motivation' and 'self-efficacy'. Interpersonal category envelops 'social/interpersonal skills', 'communication skills', 'teamwork' and 'assertiveness'. Self-management includes 'self-control', 'reliability', 'positive attitude' and 'presentation'. Finally, initiative and delivery consist of planning', 'problem-solving' and 'prioritizing'.This study collates, classifies and reveals different kinds of soft skills in a meaningful and useful way.

Allen (1998), analyzing recent statistics Canada survey data to gauge how the economy is changing and what kind of education is in demand. It takes into account the employment experience of people with different levels and types of education between 1970 and 1995.

Allen mentions that the new world is supposed to be one of flux and endless change and the relevance of today's technical skill dependant on that. According to Allen, what may be needed is a general education so that one can continue to master whatever new skills that come into vogue.

Ariyawansa (2008), reviewing the determinants of graduates' employability of Sri Lankan universities, found that availability of jobs in the Sri Lankan labor market varies among the field of study of graduates. He found that even if there are many jobs for engineering/science and management graduates in the current job market, the opportunities available for graduates in humanities and social sciences were fewer. However, he mentions that, as far as the quality of degree programs is concerned, humanities and social sciences degrees remain in a very high level. He used, evaluation results issued by the Sri Lanka Quality Assurance Council along with other primary and secondary data to come up with this conclusion. He also found that training/experience, proficiency in English, IT skills, leadership qualities, analytical ability, team work, interpersonal relations, etc. as significant determinants of demand for graduates. However, he mentions that the issues in the development of macro-economy of the country were a greater

drawback concerning graduate employability. This implies that graduate unemployability is not merely a problem to be solved within the universities; the economy should be able to absorb them into the different sectors in it.

Tan and French-Arnold (2012), in the report on "Employability of Graduates in Asia" reveal that theoversupply of graduates in some fields was an issue. They mention that according to Malaysian data in 2008, graduates of technical studies and ICT were more likely to be employed even if they are also not free from the problem. They further mention that the results demonstrated differing perspectives among graduates, universities and employers. The belief of the graduates was that they were sufficient in skills while the universities were also of the idea that they prepared students well for the workplace even if employers concluded that the new graduates lacked vital skills for employment. Therefore, identifying and addressing the gaps in employability expectations between graduates and different stakeholders with regard to the country in discussion seems important.

Tan and French-Arnold further mentioned that in economies with limited job opportunities, entrepreneurship was seen as a viable option for new graduates to go for their own businesses. It was necessary to design courses for entrepreneurship and providing government backing for encouraging them. This is being a paradigm shift which could be seen in Indonesia and Malaysia in support of graduate employability. This implies that the new trend was to produce graduates for industries where they had to play a bigger role in improving the employability of graduates. Later, the authors raise some interesting questions with regard to the concept of employability as "…Should employability be the primary basis that shapes the direction of universities? Is a university's purpose to be defined solely by the expectations of employers?" (Tan and French-Arnold, 2012: 3). This study and views of the authors are important for policy makers to understand that there should be balance between the employability purpose and the other long-term goals of an economy.

The Analytical Report of the European Commission (2010) on employers' perception of graduate employability,conducted in all 27 member States and Norway, Iceland, Croatia and Turkey, reveals that almost all skills and capabilities mostly fall under the category of 'soft skills' were considered to be very important when recruiting higher education graduates. The recruiters were most likely to highlight the importance of team-work, by sector-specific skills, communication skills, computer literacy, being able to adapt to new situations, first-class ability in reading/writing, and analytical and problem-solving skills. It also revealed that a large majority of employers who had recruited graduates in the previous five years agreed that these graduates had the skills required to work in their company. Furthermore, it was found that a slim majority of the recruiters answered that graduates with bachelor's

degrees would best match the skill requirements in their company while the recruiters preference for graduates with master's degrees was relatively low. However, the survey found that the recruiters in medium-sized companies and those in the private sector were more likely agree that graduates with bachelor's degrees would best match the skill requirements even if large companies and thosein the public sector more frequently preferred graduates with master's degrees.The results of this survey show that employers in European countries are relatively high in their perception about the skills of graduates. The results also show that there are differences in the employer perceptions between countries.

Archer and Davison (2008), writing on what do employers think and want, reveals which skills employers value most among graduates, soft or hard skills, and measures satisfaction ratings on how far graduates demonstrate these capabilities. They found the top 10 skills and capabilities that the employers think to be important. They are communication skills, team-work skills, integrity, intellectual ability, confidence, character/personality, planning and organizational skills, literacy (good writing skills), analysis and decision-making skills. They have also obtained the importance rank, satisfaction rank and the gap between the two. Their report further reveals that most employers view social skills and personality type as more important than their degree qualifications. Communication and the team-work have been identified as the most important among soft skills.

Raza and Naqvi (2011), in their article on quality of Pakistani university graduates as perceived by employers, reveal that the employers were not fully satisfied with the quality of Pakistani university graduates in all the four areas of development skills. They used the same questionnaire of Raza, Majid, and Zia (2010) in which skills had been taken under five main categories such as intellectual development skills, personal development skills, professional development skills, and social development skills. Personal development skills of graduates were found to be relatively strong while they were lowest in social development skills. They suggest that there is a need of faculty development in terms of instructional, professional and organizational aspects for improving the position since the results had reflected curricula, instruction, and professional competencies of university teachers were below the job market standards.

Shrestha (n.a), analyzed the differences in employers' and graduating MBA students' perceptions in Nepal. He compared the expectations of employers with the graduates' qualities as perceived by each group. The study revealed that although the graduates had sufficient theoretical knowledge, they were weak in communication and analytical skills. Moreover, it found that students had not been aware of their deficiencies in personal attributes of willingness to

learn and the capacity to accept challenges.The implications of the research highlight the need of curriculum development and faculty management in order to improve the quality of graduates.

Technical education and skills development authority (2012) conducted a survey on employer satisfaction particularly aiming to determine the satisfaction level of the employers on the competencies and performance of employed Technical Vocational Education and Training (TVET) graduates in the workplace. They came to the conclusion that on the point of view of the employers, finding the right workers who possesses the competencies required for a particular job was of utmost importance especially when the graduates are market-demand driven. The report therefore mentions that their training program offerings should address the requirements of the industry. This means that especially the students who are trained for professional jobs should be offered with skills needed for that particular profession.

Griesel and Parker (2009) conducted a baseline study on the South African graduates from the perspective of employers. The purpose of the survey was to take the views and expectations of employers and their evaluation of the quality of graduates produced by their higher education institutions. The study found that employers had a much more complex and nuanced view of the role of higher education than higher education offers. Moreover, the research identifies that need of building a dialogue and understanding and more collaborative endeavors between the two communities. They added, "…the role of higher education cannot be treated in isolation and must take its rightful place in producing thinking, responsive and intellectually well-grounded individuals who are flexible and can readily adapt to new demands and challenges" (p. 20).

Lowden et al. (2011) also analyzed the employers' perception of the employability skills of new graduates in UK. The study identified that although there were variations in the classification of employability, there is a broad understanding of what qualities, characteristics, skills and knowledge constitute employability both generally and specifically for graduates. According to them, employers expect graduates to have technical and discipline competencies from their degrees and also to demonstrate a broader range of skills and attributes such as team-work, communication, leadership, critical thinking, problem solving and managerial abilities, etc. It also found that representatives of stakeholders of higher education highlighted the significance of work-based learning (placements and internships) as a particularly effective approach to promote graduate employability.

Pool and Sewell (2007) (cited in Pool &Sewell, 2009) define employability as having a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful. They point out that (1) career development learning, (2) experience (work and life), (3) degree subject knowledge; understanding and skills (how well the degree course has been completed), (4) generic skills and (5) emotional intelligence as initially essential components of graduate employability. These components in conjunction with the self-esteem attributable to self-efficacy and self-confidence determine employability. The generic skills as they mention, which is known in different terms such as core-skills, key-skills or transferable skills, for e.g. include adaptability/flexibility, willingness to learn, working in a team, communication and numeracy. The emotional intelligence as has been quoted from Goleman (1998) is "the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing our emotions well in ourselves and in our relationships" (Slide 14).

2.3. From literature to the current work

The review of literature shows that there is no consensus among intellectuals regarding how the university training should be consisted of. Some are of the view that the students should be equipped with soft skills required to satisfy the employers. On the contrary, there is an argument that says that the role of the universities should not be confined to the employer needs and it should train students in order to fulfill the societal needs. However, there is a more or less consistency among the researchers who investigated for employability skills in different countries. They have found that soft skills in communication, information technology, team-work, management, etc. are significant in strengthening the employability skills among the graduates. However, the effects of professional qualifications which are earned by students during the university career and the social capital they possess have not been adequately taken into account. Therefore, the current work is to fill this gap.

3. METHODOLOGY

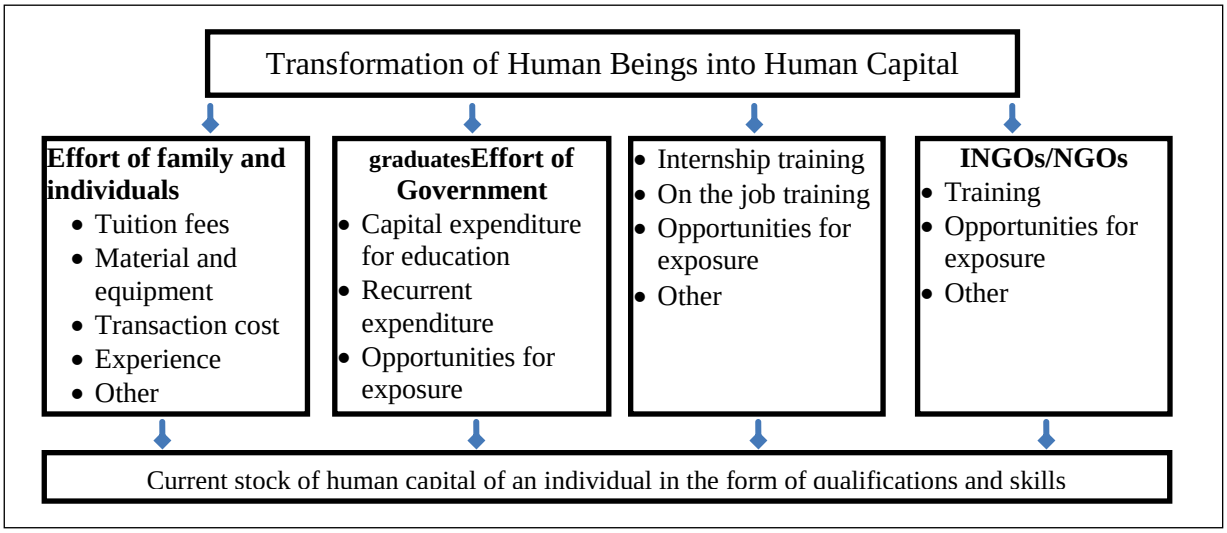
3.1. The conceptual underpinningsfor skill development

The development of theory and empirical research on training and its positive contribution to individual gains, societal gains and economic growth has been accelerated with the seminal works of Schultz (1961) and Becker (1964). According to the theory which has been developed since then, it is expected toexist a positive causal relationship between skills development in individualsand the productivity of their labor.

Theoretically, the demand for labor is due to its productivity and therefore the demand curve for labor is the same as the curve for marginal productivity of labor.Development of skills in people increases the demand for labor through the increase in labor productivity in competitive labor markets. This is the theoretical relationship that exists between the skill development and probability of getting a job in the competitive labor market. The same concept can be applied for the individuals who are engaged in higher education and have undergone softskills development in addition to hard skills.

Human capital, in the form of qualifications, competences and skills, is created as result of the attempts made by individuals and family, government and others (especially employers). In addition, individuals collate knowledge and skills by experience over time. The more the individuals are implanted with such attributes their employability, income, and the demand from employers rise. This can be understood from Figure – 3 below:

Figure – 2: The process of human capital formation



Source: Author constructed.

Stroombergen et al. (2002), explaining alternative bases of measurement, present the following formula as well to measure human capital as a summation of attributes and capabilities:

$$H_a = \sum_{i=1}^{p} m_i w_i + \sum_{j=1}^{q} o_j v_j$$

where

mi= market related attributes and capabilities

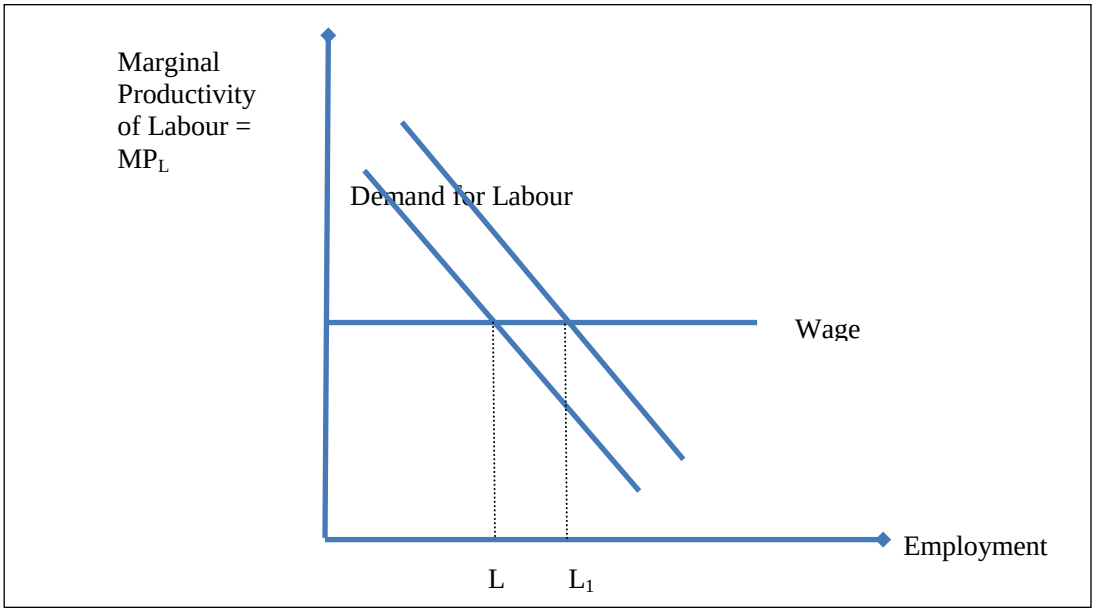
wi = market returns for attributes or capability mj

oj = other valued individual attributes and capabilities

vj = unit return for other (non-market) individual attribute or capability oj

Figure – 4 shows that an increase in productivity of labor (MPL) due to increase in skills shift the demand curve for labor to the right. The consequent increase in employment is indicated by the difference between L to L1. As far as individuals are concerned, their probability to find jobs in the competitive markets increases due to increased qualifications, competences and skills.

Figure – 3: Increase in employment due to increase in productivity



The Screening hypothesis (Arrow, 1973) and Signaling hypothesis (Spence, 1974) also provide theoretical underpinnings for skills development in people. Argument of the Screening hypothesis is that education is not viewed as conferring a higher wage due to increased skills and therefore productivity. A higher level of education of a person certifies his or her trainability, productivity being subjected to be acquired on the job. The level of education is just a measure or indicator for screening hard-working people from lazy people. The Signaling hypothesis says that education attainment is a signal for the employer about the ability or skill level of individuals for demanding them or paying a higher wage rate for them.

The most revolutionized finding in recent history was by Howard Gardner, a professor of cognition and education at Harvard University. His theory, multiple intelligence theory' was unveiled in his seminal book Frames of Mind in 1983, which challenged the existing definition of intelligence which was limited to mathematical and linguistic

abilities which can be termed as verbal and computational intelligences. He included seven intelligences in order to maximize the meaning of intelligences. As a researcher in the same field, he developed these seven intelligences under the definition 'the capacity to solve problems or to fashion products that are valued in one or more cultural setting (Gardner &Hatch, 1989 cited in www.kqed.org/assets/pdf/arts/programs/spark/multipleintelligences.pdf). The seven intelligences are as follows:

Logical and mathematical intelligence
Linguistic intelligence
Spatial intelligence (the intelligence that is not limited to visual sight)
Musical intelligence
Bodily-Kinesthetic intelligence (the intelligence of using one's mind to control body)
Interpersonal intelligences
Intrapersonal intelligence

Most of the skill indicators which are used by HIEs at present have a relation to the above intelligences. According tomultiple intelligence theory, intelligence cannot be measured by Intelligence Quotient (IQ) tests. It should be judged on the ability of individuals to solve problems or create products that are valued within one or more cultural settings (Gardner, 1983).

Another concept which has been developed in connection with skills development is the '5Cs of Positive Youth Development' (PYD) (Lerner et al., n.a). The 5 Cs consists of competence, confidence, connection, character and caring/compassion. This also reveals the importance of different kinds of skills for youth development.

There is also a question that why should governments be involved in soft-skill development which is needed for employers for their efficient functioning of businesses. However, as pointed out by original human capital theorists, employersmay not invest in improving generic skills of employees when the markets are competitive since they canmove to other firms looking for more benefits (Becker, 1964). This argument highlights the need for government involvement in improving the general skills of people since the formation of such skills contributes to the economy in many ways. Therefore, skills development, which is needed to transform human beings into valuable human capital that creates an effective demand from the employers, should be implemented to the maximum possible level during the complete length of education.

3.2. Empirical Strategy

3.2.1. Analytical Methods

The theory says that embedding skills in individuals increase the demand for them in the competitive labor market. The Signaling hypothesis implies that the employers should be signaled on the skills embedded in humans in order to create a demandfor them. The empirical strategy was to answer the question 'what are the determinants of new graduates of Sri Lanka that ensure that they are being employed?'

The study used only quantitative methods with non-experimental observations for the analytical purpose. Binary Logistic regression was the main analytical method used for attaining at the objectives.

Table – 2: The sets of main and indicator skills

Main skills	Indicator Skills
Subject specific knowledge	Subject knowledge
	Sector specific knowledge
	Ability to apply subject knowledge
Management	Decision-making skills
	Resiliency
	Keeping records
	Wise use of resources
	Planning and organizing
	Goal setting
	Risk taking
	Personal (own) management
	Time management
Thinking	Learning from the service
	Ability to accept and learn from criticism
	Critical thinking
	Analytical and problem solving skills
	Positive attitudes
	Creativity
	Innovation
	Good with numbers
Relations	Nurturing relationships
	Cooperation
	Accepting differences
	Conflict resolution
	Adaptability/flexibility
	Social character
Caring	Concern for others
	Empathy
	Volunteering
	Contributions to group efforts
	Sharing
Working	Teamwork
	Self-motivation
	Responsible
	Efficient
	Work under pressure
Leadership	Independence
	Confidence
	Commitment
	Motivating others
	Protecting others
	Integrity
Communication skills	Sinhala spoken
	Sinhala writing
	Sinhala presentation
	Tamil spoken
	Tamil writing
	Tamil presentation
	English spoken
	English written
	English presentation
Technology	Technical ability (e.g. using equipment, etc.)
	IT skills
	Knowledge on latest techniques, software, etc.

Source: Author constructed.

In order to measure the soft skills embedded in graduates at the time of getting their first (you might have to think of a better adjective here, sir, not too sure about what you mean) job were measured using 54 indicator skills which come under nine (9) main skill areas shown in Table – 2.

The skill level for each of the indicator was taken from the graduates and the answers to be expected were structured in five levels of a likert scale[2]. Finally, 'mode' for each answer was taken as the skill level of each respondent.Moreover, 'average' and the figures below 'average'were considered as low in soft skills while the figures above average were considered as high in soft skills.

Social capital embedded in graduates at the time of employment intheir first satisfactory job was measured in a similar way using the following social capital indicators.

Table – 3: Social capital indicator

	Indicators		Indicators
1	Number of letters received per week	11	Number of family members in the executive or above jobs
2	Number of letter sent per week	12	Number of government party politicians with whom you had contacts
3	Number of telephone calls received per week	13	Number of local friends you had in foreign countries
4	Number of telephone calls taken to others per week	14	Number of foreign friends you had
5	Number of emails sent per week	15	Number of societies that you joined during the university career
6	Number of emails received per week	16	Contacts with other ethnic communities
7	Number of visitors that visited (you) per week	17	Whether neighbors visited you while you were sick
8	Number of persons you visited per week	18	Whether you visited them while they were sick
9	Number of international calls you received per week	19	Whether you exchanged money with others during the university career
10	Number of international calls you took per week	20	Whether you exchanged books during the university career.

Source: Author constructed.

The respondents were coded into two groups as 'Low' and 'High' in social capitaldepending on their answers.

3.3. Variables

Dependent variable:Dependent variable was dichotomous with '1' for employed graduates and '0' for unemployed graduates.

Explanatory variables: Explanatory variables, which were considered at the initial point of analysis, were as follows:

[2] 1. Very Low, 2. Low, 3.Average, 4.High and 5. Very High

Table – 4: Explanatory variables

	Variable	Level
DEG	Degree type (with three levels)	1. Arts 2. Commerce and Management 3. Science (including applied sciences, agriculture and Engineering)
HSK	Hard skills (with three levels)	1. Normal pass 2. Second class 3. First class
PRQ	Professional qualifications (two levels)	1. No 2. Yes
EXI	Type of studentship (two levels)	1. External 2. Internal
SSK	Soft skills (two levels)	1. Low 2. High
SCA	Social capital (two levels)	1. Low 2. High
INT	Internship (two levels)	1. No 2. Yes
GEN	Gender (two levels)	1. Female 2. Male
NAP	Number of applications	Continuous variable

3.4. Data and collection methods

The study mainly used primary data for the analytical purpose. The secondary data used mainly for identification of the research problem and planning the research process.

Quantitative data was collected using a questionnaire for both employed and unemployed graduates who passed out from the universities of Sri Lanka during the last five years by the end of 2013. The composition of the questionnaire was as follows:

Section A: This section comprised of questions designed for obtaining the basic information regarding informants.

Section B: Section B consisted of the questions that aimed to measure the soft skills of graduates at the time they were awarded the degree. This section presented two lists of skills that a graduate can possess. The list-1 (in 'Q16' in Appendix-1) comprised of nine (9) main skill areas and 54 skill indicators with a likert scale of five levels.This question was to reveal the levels of importance of skills according to the view of the respondent[3]. Question number

[3] The five level were 1. Unimportant, 2.Of little importance, 3.Moderately important, 4.Important, and 5.Very important.

17 presented the same list of skills to reveal the levels of skills that the respondents possessed at the time of graduation, according to their view under five levels of the likert scale[4].

Section C: Questions related to the family, social relationships and contacts of the respondent were included in this section.

Section D: Finally, Section D was deliberated to get the information about respondents' attempt to explore the opportunities in the labor market.

Sampling[5]: The sampling method of the study was multiple in kind and included the following two steps:

Step 1: Convenience sampling

First, possible respondents who were known to the researcher and his colleges were listed under two categories, employed and unemployed graduates. The preparation of this list was a kind of activity which was followed under the 'conveniencemethod of sampling'. The graduates included in the convenience list were 275 from each category, employed and unemployed graduates.

Step 2: Random

Second, a one-third of the respondents were randomly selected from each of the two lists using systematic random sampling method. The systematic selection followed the procedure that every third (3rd) number in each list was selected until the total of one-third is completed. However, finally, only the successful responses were taken into consideration for the analytical process.

Table – 5: Sampling procedure

Category of respondents	No. in convenience list	Radom selection (1/3 of the convenience list)	Successful responses
Employed graduates	275	92	67
Unemployed graduates	275	92	81
Total	550	184	148

[4] The five levels were 1. Very low, 3.Low, 3.Average, 4.High, and 5. Very high.

[5] The methodology of sampling (convenience to random), which has been applied, was introduced by the author through this study.

However, although this is a small-scale sample, it is expected that with the expansion of the sample size, the results can be extrapolated to the entire country. Since the convenience list was prepared based of the contacts of the researcher and his colleagues with the possible respondents, the number of none or weak responses could be minimized.

3.5. Limitations

The mainlimitation of the study was the smallness of the sampling size. However, the validity and the extrapolation of the results can be maintained at a higher level since both employed and unemployed graduates from different universities and different areas of the country were represented in the sample.

4. RESULTS AND DISCUSSION

4.1. Results: Binary Logistic Analysis and Results

For the logistic regression, the level of employability was recorded into either employed or not employed, since binary response was required. The case processing summary of Table-6 displays the total number of cases or observations included in the analysis as 148 and the number of missing cases as zero. Although the original value that has been given for the dependent variable is 0 if the graduate in question is unemployed, and 1 if he/she is employed.

Table-6 Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	148	100.0
	Missing Cases	0	.0
	Total	148	100.0
Unselected Cases		0	.0
Total		148	100.0

a. If weight is in effect, see classification table for the total number of cases.

At the first step, nine (9) explanatory variables were taken for the analysis to test whether there was a relationship with the dependent variable. It found that three variables, ‘Gender’ and ‘Sector (SEC)’ had no relationship with the dependent variable when it was tested with the Spearman correlation test and while analyzing through other descriptive methods. The remaining six (6) variables, namely, ‘Degree type (DEG)’, ‘Professional qualifications (PRQ)’, ‘Number of applications (NAP)’, ‘Hard skills (HSK)’, ‘Soft skills (SSK)’, and ‘Internship (INT)’were brought forward for developing the model.

At the second step, the problem of multi-co linearity was identified through correlation test and accordingly two variables, 'Social capital (SCA)' and 'Profession of father (PRF) were removed since both of those variables were represented by 'Soft skills (SSK)'.

At the third step, the remaining six predictive variables were brought forward for the analysis using Binary Logistic regression method and variables were added in a forward stepwise method, known as the Wald method. A variable had to be significant at the 0.05 level to enter into the model, while it had to be significant at the 0.10 to remain in the model[6].

Finally, the model in the step 5 of the analysis given in Table – 7 below helps identify the determinants of employability.

Table-7: Results of the binary logistic results

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Professional Qualifications(Low)	-2.276	.965	5.559	1	.018	.103
Soft Skills (Low)	-4.539	1.117	16.521	1	.000	.011
No. of Applications	1.293	.366	12.517	1	.000	3.645
Degree			11.914	3	.008	
DEG(Arts)	.708	1.002	.498	1	.480	2.029
DEG(Mgt. and Com.)	3.773	1.512	6.225	1	.013	43.498
DEG(Sciences)	4.283	1.413	9.189	1	.002	72.489

Note: Variable(s) entered on step 4: PRQ.

Exp (B) representing odds ratio, measures the extent to which the odds in favour of a positive response are raised when the level of the associated explanatory variable is raised from the reference level to the level specified in the table of results. This study measures the extent to which the odds in favour of being employed are raised when the levels of each explanatory variable is raised from the reference level (low) to the highest level (high). Thus, it shows that being a science graduate (DEG 3) is the strongest determinant of being employed, having 5 per cent confidence for Exp (B) of 72.49. Being a management graduate (DEG 2) is the second strongest determinant since the Exp (B) accounts for 43.5. However, being an arts graduate (DEG 1) has not been significant to include in the model as a determinant of being employed. Furthermore, the position of not having professional qualifications negatively affects being employed and its odds ratio is .103. Similarly, the position of not having soft skills also negatively affects being employed with Exp (B) of .01. Third important factor that positively affects to reach the status of being employed is the number of applications (NAP) of graduates for jobs in the labor market.

[6] Most standard computer programmes allow users to make these selections (Chap, 1998).

Table – 8: Model summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test		
				Chi-square	df	Sig.
5	43.354[a]	.665	.887	1.296	7	.989

Note: Estimation terminated at iteration number 8 because parameter estimates changed by less than .001.

The -2Log Likelihood (-2LL) is a measure of badness-of-fit, illustrating error remaining in the model after accounting for all independent variables. The -2LL of 43.354 indicates that there is no significant error remaining in the model. The Nagelkerke R square shows that about 89 per cent of the variation in the outcome variable (probability to be employed) is explained by the model in step 5. A larger p-value of the HosmerLeneshow Test indicates a better match to claim that the model fits the data adequately. Accordingly, the model is best at the fifth step.

4.2. Discussion

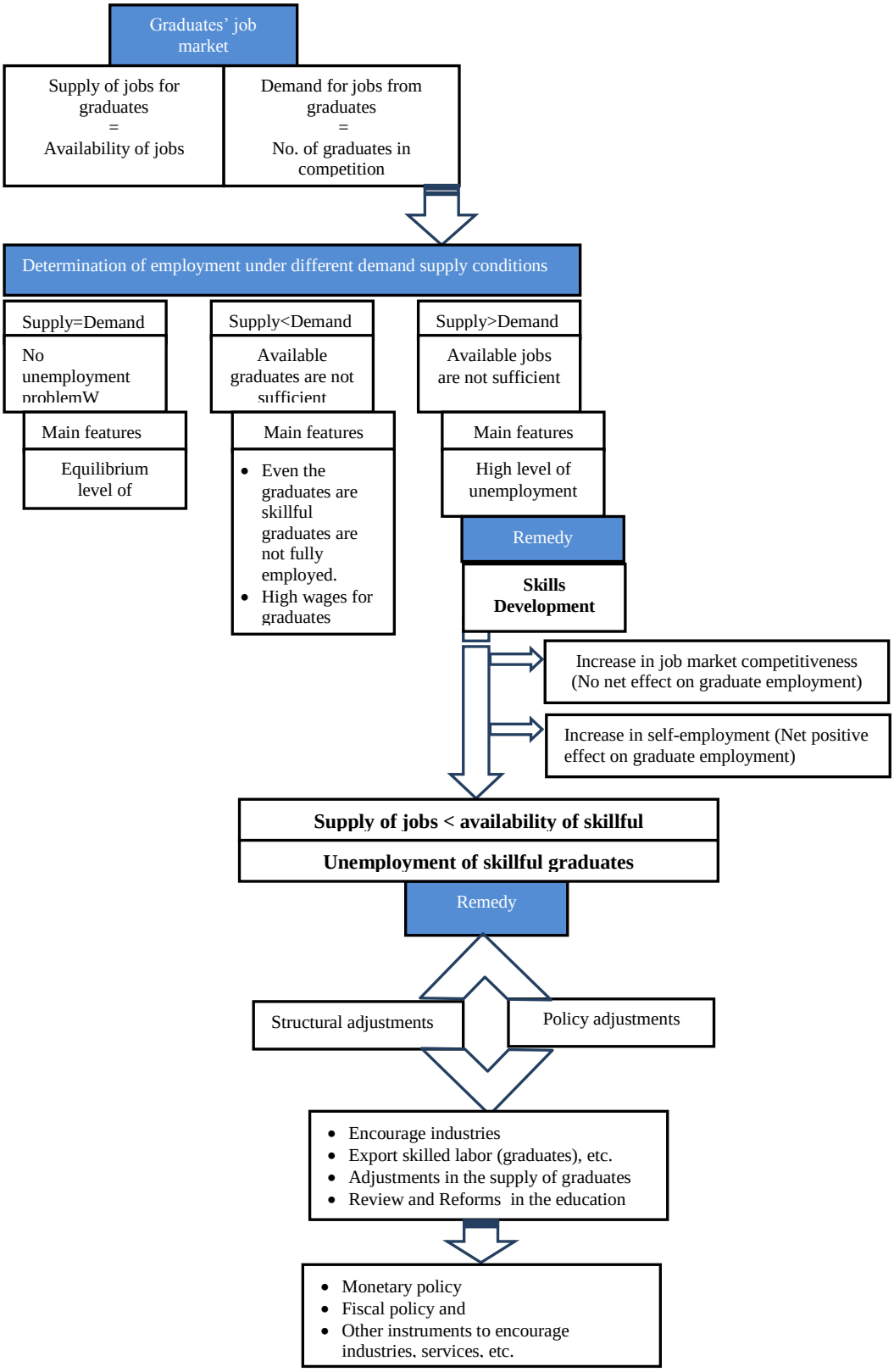
The theory, findings of previous studies and the results are taken into consideration in the discussion. The study achieved the aim and found the determinants of graduate employability according to the socio-economic setting of Sri Lanka.First, the literature review identified that different kinds of soft skills have been found to be important in determining the employability of graduates. However, although there was consistency between the findings there was no consensus among the researchers. It pretended that the socio-economic background and some other factors are influential in this regard. Second, it shows that there is a difference between the degree types in determining the employability in the job market in Sri Lanka. Management and Science graduates, who include physical, bio, agriculture and Engineering,have a higher probability of being employed contrary to Arts graduates. Third, this study identified that soft skills and social capital are equally and in correlation to each other determine graduate employability. It implies that it is not only the improvement of soft skills, developing social capital among the undergraduates is equally important.Finally, professional qualifications were identified as an important determinant of employability,since data suggests that undergraduates who followed a professional course like CIMA, Charted Accountancy, Information Technology, etc. have a higher probability of obtaining a job in the competitive job market.Furthermore, the number of applications for jobs submitted by a graduate that indicates the effort of obtaining a job is a finding that could not be seen in the selected literature.

Data suggests that the gender and the type of studentship (internal or external) werenot important in obtaining a job. This means that if the graduates are equipped with necessary attributes, factors like gender, type of studentship

become negligible in determining the employability of graduates. Furthermore, data does not suggest that internship and uplift the probability of employability of graduates even if the reasoning for this has not been covered by the current study.

However, the findings of this study do not suggest that having a management or science degree with professional qualifications and soft skills alone with the effort of graduates to obtain jobs, necessarily fulfill the availability of a job. When considering the theory and the practice as well, even if having these attributes increases the competitiveness of graduates in the labor market, the economy should be strong enough to absorb them to its different sectors. This is why employment collapses in some countries during times of severe recession, and not due to a decline of skills and other attributes of workers. Hence, the way of determining the employability of graduates in the job market can be summarized as shown in Figure -5. Therefore, the policy makers not only within the education system, but also in the entire economy should be aware of the broader role that they have to play. Especially, as pointed out in the literature review by some researchers, the students should be trained not only for employers' needs but also for societal needs. Even if the employment will collapse with the collapse of employers, the work related to societal needsremains so long as the society remains.

Figure – 4: Graduate Job Market Analysis



Source: Author constructed.

5. CONCLUSIONS

Literature revealed that there are important soft skills which should be improved for increasing the employability of graduates though the types of skills identified in different studies are not completely equal. In the case of the graduate job market in Sri Lanka, it seems that Arts graduates still face a problem in obtaining a job. Employability of Science and Management graduates who possess professional qualifications and good soft skills, social capital and are high in the enthusiasm and effort to obtain a job remain satisfactorily high. This implies that the student intakes for different degree programsor domains of disciplines should be adjusted according to the availability of jobs. This further suggests that the employability problem can be minimized so far as the students are diverted to more professional courses.

Furthermore, data suggests that the gender, type of studentship (internal or external), internship, hard skills measured by the level of passing (e.g. with first class, second class, etc.) were not significant factors in obtaining a job although the reasoning for such a possibility was not covered by this study.

However, even though the improving the soft skills, professional qualifications etc. of students is important in raising their competitiveness in the labor market, it does not provide a solution to the problem of graduate unemployment of the country. The sectors of the economy should be adjusted in such a way to absorb not only graduates but also the entire labor force of the country. This is what the policy makers, who are responsible in this regard, should understand.

6. IMPLICATIONS FOR POLICY DEVELOPMENT

Based on the results of the country study and the points obtained from previous studies which have been conducted in different countries, the following implications for policy development can be drawn:

Rethinking on university intakes from different fields of study: University intakes from different fields of study should undergochanges taking into consideration the needs of the country. However, this adjustment should simultaneously be accompanied by parallel process of diverting a part of students from academically oriented study programs to more professional kinds of programs before students in the path of formal education.

Professional qualifications: Students should be encouraged to obtain professional qualifications in addition to the degree. Especially, the trainings that reinforce the quality of the degree would be more advantageous for the students and the country as well.

Hard skills, soft skills and social capital: Hard skills (including the field of study) are not equally important for all jobs. For professions like medical, engineering and accountancy, possessing of hard skill is essential for obtaining a job in that field. Even if they are less in soft skills, there is no problem in getting a job in the labor market which requires high levels of hard skills. However, the students who are trained for non-professional jobs should improve soft skills and social capital, since hard skills is not the main determinant of employability for such graduates.

Enthusiasm: Enthusiasm or effort of students (graduates)is also important since hard skills and all life skills are largely determined by these. The result revealed that the number of applications for jobs was a determinant of employability, which implies that students should be trained with positive attitudes in order to be able to face challenges.

The kind of training: Currently, in Sri Lanka, the students are trained aiming at the needs of the employers. However, it is a strong requirement that students should be trained aiming at the needs of the society since the employers are just a one category of stakeholders. In addition to the internship trainings provided through employers, the graduates can be trained to do what the society needs[7].

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[7]For example, educating people on correct ways of garbage disposal, helping disabled people, etc.

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