

Employability of university graduates; Investigation of graduate's and employer's perspectives on employability

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Abstract-

The skill gap among the graduates is a common problem in Sri Lanka, where the skill levels of the graduates and the skill level perceived and required by the employers does not match when the graduates enter in to the corporate sector. Although this is a pertinent issue, in the extant body of literature investigations are lacking. This paper aims to investigate the factors affecting the employability of graduates in the Sri Lankan context. Particularly, investigates the factors from both graduate's and employer's perspectives. For this purpose, 175 recently graduated graduates and employers engaged in recruitment were considered from the Sri Lankan universities and corporate sector. Structural equation modelling was used to test the hypotheses through AMOS statistical package. The findings of this study provide significant insights for the academics and university administrators to facilitate graduates with requires skills and competencies to enhance the employability of graduates. The originality of this paper is on its contribution to the extant body of literature by examining the factors affecting employability of graduates from both graduate's and employer's perspective in one model.

emphasize on the skill gap which prevails among the graduates. It is identified that among the graduates who obtain the degrees, significant percentage is overqualified for the job. From every graduate, one out of five possess skills more than required for the job they are performing (Li et al., 2006). Wickramasinghe and Perera (2010), also highlighted that among the Sri Lankan graduates who obtain the degrees, significant percentage is overqualified for the job. Thus, it can be identified that the education system has failed to produce graduates with required skills for the job market (Wickramasinghe & Perera, 2010). Therefore, within this context it is a puzzle that warrants a comprehensive study on why there is a skill gap among the graduates.

Though much attention has been paid for enhancing the graduate skills and education, still there is a lacuna in studies on efficiently transferring graduates to workplace. Finch et al. (2012) highlighted that identifying the factors which determine employability and its relationship is important, mainly to reduce the number of overqualified graduates and to select well equipped graduates by employers to achieve competitive advantage. According to Teichler (2009) previous studies examined how education success relate with career success but lacks focus on how the graduates can be transitioned well to the workplace. Holden and Hamblett (2007) also emphasized the need for additional research to examine how the new graduates can be transitioned to the workplace.

Extensive amount of research has been done on employability of graduates (Ball, 2003; Cotton, 1993; Davies, 2000; Ranasinghe, 1992; Raybould & Sheedy, 2005). Most of the studies on employability examines determinants of employability from graduate's perspective (Van der Heijden et al., 2009). Such studies revealed the education related achievement determines employability. Therefore, in most of the studies the theoretical context for employability is developed based on the factors which influence for the educational success of the graduates.

Index Terms- employability, graduates, employer's perspective, graduate's perspective

I. INTRODUCTION

Before world war two secondary education was restricted to the elite parties who had the economic affordability (Sutherland, 2008). Due to the demographics and social shifts the number of enrolments for higher education has increased. In Sri Lanka, at the end of 2014, 8892 undergraduate enrollments recorded only for the private degree awarding institutes (Census and Statistics Sri Lanka, 2014). Although higher education has increased, a survey by McKenzy (2012) revealed that 40% of the employers

Further, as per the literature available current theories explores only one aspect. Either graduate's perspective of employability or employer's perspective of employability. Human capital theory (Schultz 1961 & Becker 1964) and Job market signaling theory (Stiglitz 1975; Arrow 1973; Spence 1973) examines the relationship between education credentials and employability of graduates. However, Both the theories do not focus on impact of employer's beliefs on employability of graduates. Baily (2008), Non substantialist approach and New institutionalism theory (Meyer & Rowan 1977; Di Maggio & Powell 1983) addresses impact of employer's beliefs on employability. However, as per the literature available on employability theories, education credentials and employer belief's on employability has not been investigated in one model. Thus, current study addresses this lacuna in the theory by taking both the aspects into consideration. This study provides a theoretical contribution by integrating "non-substantialist" model of Baily (2008) and Key to employability model of Pool and Sewell (2007). Thus, current study contributes to the existing literature by developing a model which includes both the graduate's and employer's perspectives on employability o graduates.

Further, this study provides an empirical contribution. It is highlighted that most of the studies which investigates factors which influence for employability gives more theoretical perspective and no much empirical evidence is provided (Wickramasinghe & Perera, 2010). Although, case studies available, lacks generalizability (Wickramasinghe & Perera, 2010). Therefore, comparing and extrapolating the findings is challenging. As per the literature available a study has been carried out in Sri Lanka by Wickramasinghe and Perera (2010) on the perceptions of graduates' and lecturers' towards employability skills within the computer science field. However, their study does not focus on both employers' and graduate's perspectives on employability of graduates and the study is limited to the field of computer science. Thus, the current study empirically examines the factors which decides employability of graduates from both graduates' and employers' aspects in the Sri Lankan context.

The main objective of the current study is to investigate the issue of efficiently transferring graduates to the workplace from the employer's and graduate's perspective, through investigating the factors influencing employability of graduates.

II. LITERATURE REVIEW

Extant literature defines employability in several ways. As identified by Hillage and Pollard (1998, p. 2), "Employability is the ability to get a job and keep fulfilling the required work". Further, employability refers to "realizing the sustainable employment by moving self-

sufficiently in the labor market". Yorke (2004, p. 8) defined employability as "a set of achievements skills, understandings and personal attributes that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the Economy".

Previous studies examine employability at two levels. First level condenses specific Employability factors such as listening skills, writing skills, academic performance. Second level consists higher order factors such as soft-skills, functional skills (Bhaerman & Spill, 1988; Longest, 1973). In Finch et al.'s (2012) study, the higher order category "meta-skills" contained specific employability factors such as listening skills, professionalism, and interpersonal skills.

As per the previous researches USEM model suggests four determinants of employability. Understanding, skills, efficacy beliefs and metacognition (Knight & Yorke, 2004, p 37). Hillage and Pollard (1998, p. 2) identified 4 factors which influence for employability. Employability assets which consists graduate's knowledge, skills and attitudes, Deployment assets which consists career management skills, presentation skills and external factors. According to the study of Bennett et al. (1999) five elements of employability of graduates can be identified. They are disciplinary content knowledge, disciplinary skills, workplace awareness, workplace experience and generic skills. Further Law and Watts, (1977) DOTS model suggests Decision learning, Opportunity awareness, Transition learning, Self-awareness (Watts, 2006) as employability prospects of a graduates.

A. Degree subject knowledge and understanding skills

Researchers have explored that graduates are judged based on the success of the completion of the degree and the knowledge that they gain in a particular discipline (Dacre & SewelIt 2007). In that, problem solving is a major determinant of employability of a graduate (Reid & Anderson, 2012; Stiwe & Jungert, 2010). Range of competencies applied for synthesizing, cognition, analysis and judgement is considered as problem solving skills. (Halpern, 1998, p. 451). Problem solving skills considered as a major determinant of job performance. (Schmidt & Hunter, 1998, 2004).

B. Career development learning

Career developmental learning enables graduates to become more self-aware about things that they are really interested in and which best fit to their personalities (Gabris & Mitchell, 1989).

C. Experience

Pre-graduate work experience such as experiential learning opportunities and informal career related work experience shows higher job acquisition skills. (Hopkins et al., 2011; Gault et al., 2010; Callanan & Benzing, 2004; Gaultet al., 2000)

D. Emotional intelligence

As Goleman (1998) outlines emotional intelligence is managing emotions well in the relationships and interactions. Moynagh and Worsley (2005) suggest emotional intelligence plays vital role in jobs where human interaction is high especially in the knowledge-based economy. People with emotional intelligence build good relationships, motivate themselves and achieve better career success (Cooper, 1997)

E. Generic skills

As per Pedagogy for Employability group (2004 p.5) list of generic skills are introduced as the transferrable skills of a graduate such as creativity, adaptability, willingness to learn, autonomy and working in a team.

F. Employer's belief

According to Cai (2012) Employer's belief refers to the value that employers gives to the employees and how they think about the graduates who have similar educational credentials. As Cai (2012) stated employer's belief about employment of graduates influenced by 3 factors including exogenous factors, initial signaling effects and private and public learning.

III. THEORETICAL UNDERPINNING

This study is based on the theories which influence for the graduate employability such as Human capital theory (Schultz 1961 & Becker 1964), Job market Signaling theory (Stiglitz 1975; Arrow 1973; Spence 1973) and New institutionalism theory (Meyer & Rowan 1977; DiMaggio & Powell 1983). One of the main theories which underpins the study is the Job market signaling theory (Stiglitz 1975; Arrow 1973; Spence 1973). This theory postulates that employers evaluates the employability of the graduates based on the signals send by the employees. Cai (2012) mentioned that employees send the signals about their ability and capacity by obtaining education credentials. Therefore, as per the Job market signaling theory education credentials of an employee becomes a main determinant of employability.

Human capital theory (Schultz 1961 & Becker 1964) postulates that employers have the ability to evaluate employee performance on rational basis. As Schultz (1961)

and Becker (1964) stated, education provides skills and capabilities that can be marketed. Thus, highly educated people tend to have more employment opportunities and perform well in their job. Non substantialist approach (Bailly. 2008) conceptualizes that to process information individuals use cognitive frameworks, shared norms and belief systems. According to Bailly 2008 belief systems of employers governs employment decisions and decides the employability of employees.

IV. CONCEPTUALIZATION AND OPERATIONALIZATION

On the basis of theoretical and empirical studies which are discussed and presented in the literature review, the study draws the following hypotheses and conceptual framework for this research:

H1: Degree subject knowledge has an impact on the employability of a graduate.

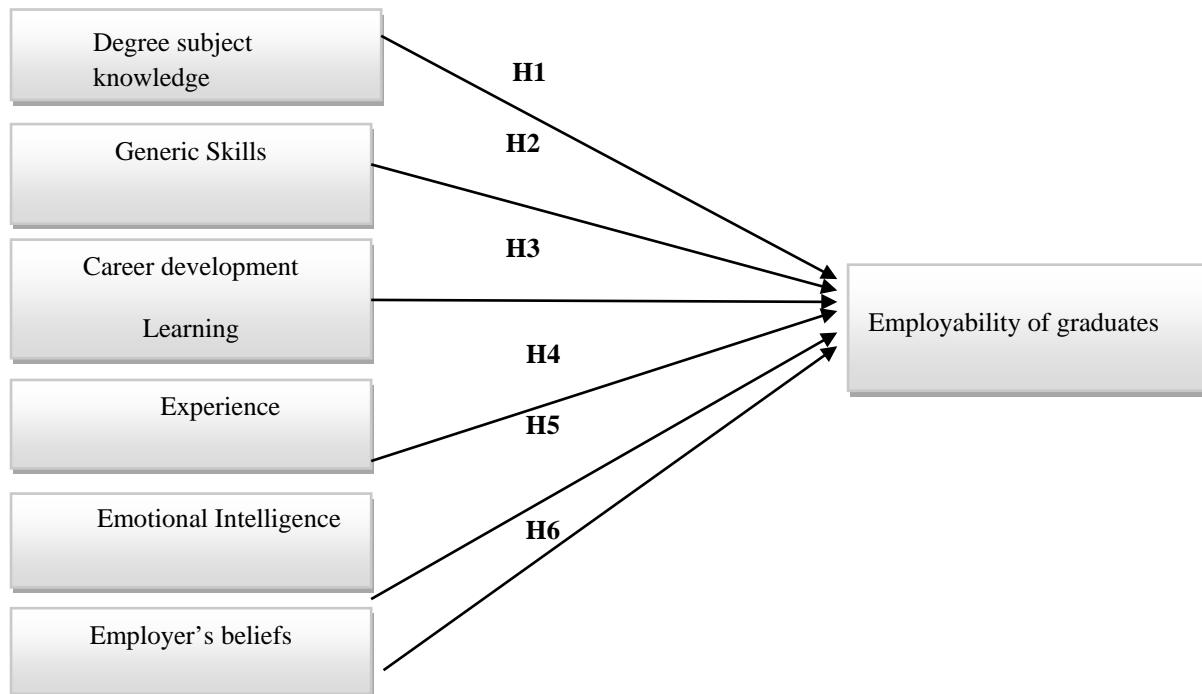
H2: Generic Skills has an impact on the employability of a graduate.

H3: Career development Learning has an impact on the employability of a graduate.

H4: Experience has an impact on the employability of a graduate.

H5: Emotional Intelligence has an impact on the employability of a graduate.

H6: Employer's beliefs and cognitive frameworks has an impact on the employability of a graduate.



Source: Author

Table 1: Sources of Measures

Variables	Source
Degree subject knowledge	(Johnes, 2006)
Generic skills	(Johnes, 2006) (Ng et al., 2010)
Career development learning	(Law & Watts, 1977)
Experience	(Pool & Sewell, 2007)
Emotional intelligence	(Goleman, 1998) (Goldberg, 1990, 1992) (Pool & Sewell, 2007)
Employer's beliefs	(Meyer & Allen, 1991) (Pool & Sewell, 2007)

Source: Author compiled based on literature

V. Methodology

Present study follows quantitative method which is suggested by several scholars (Bryman, 2011; Creswell, 2014; Edmondson & McManus, 2007) and governed by the positivistic research philosophy. The operationalization of the study is presented above.

Sample selection was done in two stages. In the initial stage a purposeful sample of 175 employers were selected. Specially the employers and managers who directly influence and make recruitment decisions. Following Creswell (2009) managers who are involved in recruitment decisions were selected from a diverse background to make the entire population more representative. In the second stage sample of graduates were selected. Sample frame was

the list of graduates who passed out within less than 12 months in government and private universities in Sri Lanka. Sample was selected using stratified random sampling technique. Since there are so many faculties only the faculties which has significant employability issues were selected. This is done to avoid the faculties like medical, where the job is guaranteed by the government after the graduation. Therefore, for the present study 175 graduates from the faculties of humanities and social sciences were considered. Sampling was done for the study based on the same sampling technique followed by Wickramasinghe and Perera (2010) in their study on perceptions of Graduates', lecturers' on employability skills. Following Wickramasinghe and Perera (2010), the questionnaire was administered among the graduates sample to collect the data.

VI. Data Analysis

Prior to initiating the analysis, data was screened to assess and fix missing values, univariate and multivariate outliers, data normality, homoscedasticity, homogeneity and data linearity (Tabachnick & Fidell, 1996). According to Malhotra and Dash (2011), random missing values were replaced with 'neutral values' or 'imputed values'. Further, Herman's single factor test (Podsakoff et al., 2003) was conducted to ensure that there were no common method biases in the study.

The data was analysed using the structural equation modeling approach to examine the model and test the hypothesized relationships with AMOS. Goodness of measures was performed to test the validity of measurement instruments, and a structural model was analysed to empirically establish the relationships between the constructs and test the model fit of the hypotheses. Construct validity, convergent validity and discriminant validity was assessed and assured in the present study to ensure the goodness of measures. Cronbach's alpha was tested to ensure the reliability of the measures.

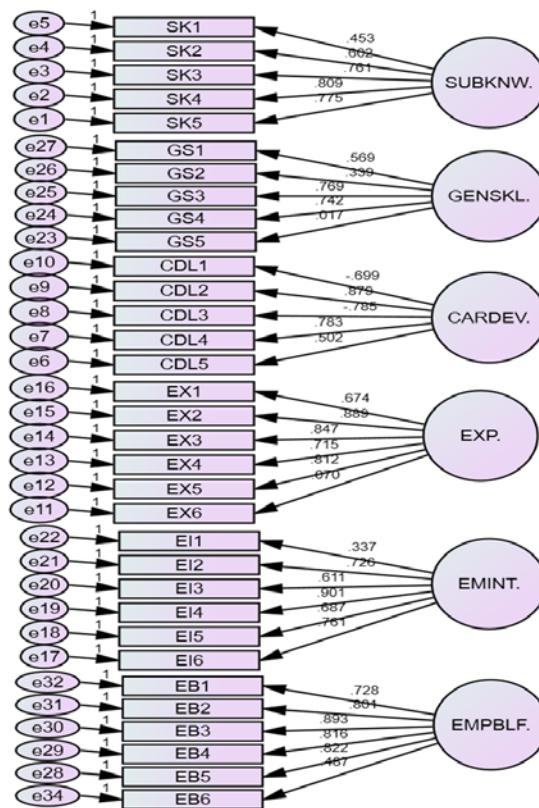


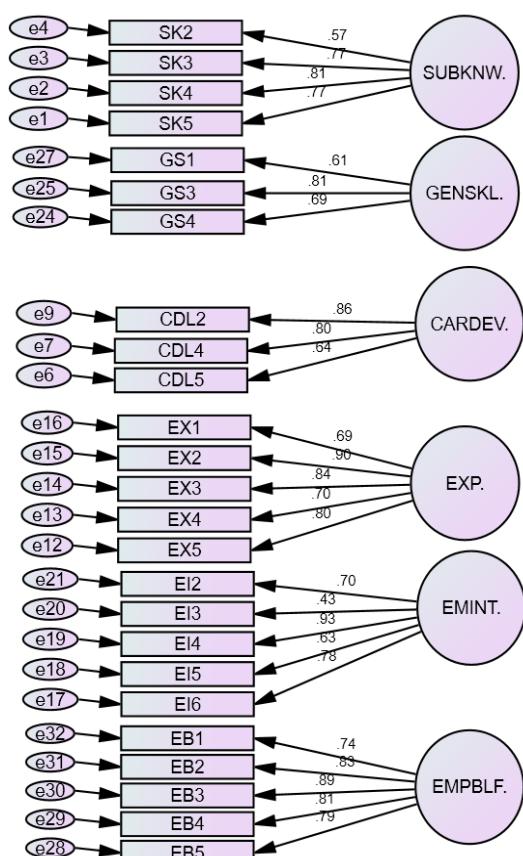
Figure 1: First order measurement model

Table 2: Validity and Reliability of measures

Variables	Cron bach's Alpha	Std Factor loading (Min- Max)
Degree subject knowledge	0.822	0.453-0.809
General skills	0.754	0.344-0.847
Career development learning	0.782	0.502-0.879
Experience	0.831	0.070-0.889
Emotional intelligence	0.723	0.337-0.901
Employer's beliefs and cognitive framework	0.811	0.487-0.893

According to table 2, except for few items, all the variables have equaled or surpassed the minimum factor loading. Each variable was examined and the items which did not meet the threshold level were removed. Since certain items (SK1, GS4, GS5, CDL1, EI1) did not show satisfactory level of validity such items were not taken for the refined model. As per Matsunga (2010) items with the standardized regression weights which are less than 0.5 needs to be removed. After the removal of the items, the modified measurement model did not exhibit standardized regression weight issues and all the indices of GOF were met satisfactorily as recommended by Hair et al. (2010). All the variables met the minimum cut off value of the Cronbach's Alpha ≥ 0.7 (Hair et al., 2010), thereby indicated a satisfactory level of reliability.

Figure 2: Refined model



Source: Survey data

Table 3 GOF Indices for the Final order measurement Model

Incremental Fit		Parsimony-Adjusted measures					
CMIN/D	GFI	RMSE	IFI	TLI	CFI	PRA	TIO
F	A						
5.997	.668	.139	.660	.652	.659	.980	

Source: Survey

Structural model and hypotheses testing

Structural Equation Modelling (SEM) was used to test the hypotheses. The overall structural model was assessed for the model fit, and it produced the following value indices. Some researchers (Paswan, 2009) allow values as high as 5 to consider a model adequate fit (Lomax & Schumacker, 2004). Therefore, the structural model in the present study indicated a moderate level of fit.

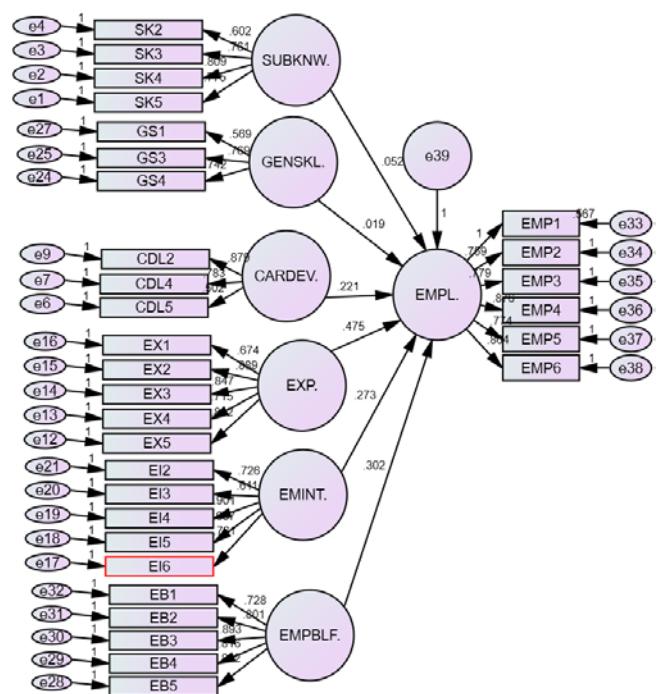
Table 4: GOF Indices for the Structural Model

Incremental Fit		Parsimony-Adjusted measures					
CMIN/DF	GFI	RMSEA	IFI	TLI	CFI	PRATIO	
5.477	.630	.132	.642	.626	.641	.961	

Table 5: Hypotheses (H1-H6)

Hypotheses	Beta Value	P value	Decision
H1: Degree subject knowledge has an impact on the employability of a graduate.	0.052	0.000	Supported
H2: Generic Skills has an impact on the employability of a graduate	0.019	0.000	Supported
H3: Career development Learning has an impact on the employability of a graduate	0.221	0.034	Supported
H4: Experience has an impact on the employability of a graduate	0.475	0.000	Supported
	0.273	0.000	Supported
H5: Emotional Intelligence has an impact on the employability of a graduate	0.302	0.000	Supported
H6: Employer's beliefs and cognitive frameworks has an impact on the employability of a graduate			

Figure 3: Structural model for direct relationships



Source: survey data

VII. Discussion

Findings of the present study relating to the factors which has an impact on employability of graduates confirms previous empirical evidence. As per the findings of the present study, graduate's subject knowledge to a certain extent decide his/her employability. As Johnes (2006) revealed the qualified graduates have more employment opportunities (as cited in Pool & Sewell, 2007). According to the findings of the present study generic skills such as transferrable skills of a graduate, creativity, adaptability, willingness to learn, autonomy and working in a team has an impact on their employability. Harvey et al. (1997) also confirmed that employers are seeking for well-developed generic skills from the graduates. Also, findings of the present study suggested that career development learning has an impact on the graduate's employability. Which is confirmed by previous studies where career developmental learning enables graduates to become more self-aware about things that they are really interested in which best fit to their personalities (Gabris & Mitchell, 1989). Further, as stated by Foster (2006, p. 5) career development learning enables students to present themselves effectively and to make better career decisions which enhances employability of the graduates. Career development Learning may directly relate with the Employability of graduates. Moreover, according to the findings of the present study, experience has a

significant impact on the employability of graduates. It confirms the previous empirical findings where pre-graduate work experience such as experiential learning opportunities and informal career related work experience shows higher job acquisition skills. (Hopkins et al., 2011; Gault et al., 2010; Callanan & Benzing, 2004; Gaultet al., 2000). Further, it confirms the findings of Pedagogy for Employability Group (2004), which stated that graduates who gain experience enhances their employability than graduates without the experience. Andrews and Higson, (2008) also confirmed that career related experience enhances the workplace readiness of a graduate. Findings of the present study further suggested that graduate's emotional intelligence play an important role in determining his/her employability. This confirms the findings of Moynagh and Worsley (2005) which emphasized that emotional intelligence plays a vital role in jobs where human interaction is high, especially in the knowledge-based economy. People with emotional intelligence build good relationships, motivate themselves and achieve better career success (Cooper, 1997). This also confirms the study of Yorke and Knight (2002), which stated that well developed emotional intelligence competencies required by graduates to strengthen their employability. Moreover, from employer's perspective, the value that employers gives to the employees and how they think about the graduates who have similar educational credentials determines the employability of graduates. Several previous studies confirms this which stated that employers' perceptions such as belief and cognitive frameworks influence the graduate employability (Bailly, 2008; Cai, 2012).

VIII. Limitations, Implications and Future research

The results of the study must be interpreted in light of its limitations. Since the present study is a cross-sectional study, findings must be interpreted cautiously as employability varies as time passes. In order to overcome such limitations, it is suggested for future researchers to consider a longitudinal study. Study is limited to graduates who passed out within less than 12 months in universities in Sri Lanka. Thus, future researchers are encouraged to investigate how employability would vary among the graduates who have graduated more than one year.

This study contributes to the extant body of literature in several ways. Present study addresses the lacuna in the theory by taking both graduate's perspective of employability and employer's perspective of employability into consideration. As per the literature available on employability theories, education credentials and employer belief's on employability has not been investigated in one model. Further, this study provides an empirical contribution by studying the factors affecting the employability of graduates in the Sri Lankan context, as

lack of empirical findings available in the extant literature in the Sri Lankan context.

The findings of the present study have significant managerial implications. Particularly, for the university administrators and academics to facilitate the graduates with the required skills and competencies which makes them easily employable after their graduation. As the finding of the study revealed that the career development learning and experience has a significant impact on graduate's employability, it is suggested for university administrators to establish more links and networks with various organizations in the industry to provide undergraduates with valuable internships and training opportunities. Further, academics need to provide training and development programmes for graduates to develop their emotional intelligence. As Central Bank of Sri Lanka and National Science foundation reveals there is a gap in the skill levels of the graduates and the skill level perceived and required by the employers, the findings of the present study would provide significant insights for universities to provide solutions to this pertinent issue by introducing changes to curricular, facilitating graduates for developing their employability skills and career advisors to provide proper career guidance.

IX. Conclusion

The findings of the study shed lights on the factors affecting the employability of the graduates. Accordingly, it can be concluded that employability is affected by the graduates' subject knowledge, generic skills, career development, experience, emotional intelligence and employer's beliefs. The findings of this study are much significant as the factors affecting graduate's employability have not been sufficiently investigated, from both graduate's and employer's perspective, even though the skill gap among the graduates is a pertinent issue in Sri Lanka. This study has significant managerial implications particularly, for the university administrators and academics in preparing graduates who have high employability in the future.

X. References

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