IDENTIFICATION OF FACTORS AFFECTING THE UNEMPLOYMENT OF EDUCATED YOUTH IN SRI LANKA

Lakmini Uthpala Mallawarachchi

(168838U)

Degree of Master of Science in Business Statistics

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DECLARATION OF THE CANDIDATE AND THE SUPERVISOR

I declare that this is my own work and this dissertation does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other university or Institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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Prof. T. S.G. Peiris

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ABSTRACT

As the unemployment of the educated youth has been a common problem over the past years in Sri Lanka, this study was initiated to determine the factors affecting the educated unemployed youth (EUY). Data from the Annual Labour Force Survey in 2016 conducted by the Department of Census and Statistics (DCS) was used for this study. Data has been collected using the two stage stratified sampling technique. This analysis is based on 4002 individuals whose age category of (15-24) and qualified with the G.C.E (O/L) and G.C.E (A/L) qualifications. For the analysis, seven variables used were gender, race, religion, marital status, education attainment, literacy in English and the residential sector. When each variable was considered separately, it was found that gender, religion, education attainment, literacy level in English and residential sector have significant (p < 0.05) impact on EUY. The educated female unemployed youth is significantly higher than that of males. The highest percentage of EUY was found among Buddhists while the lowest percentage was found among Muslims. The rate of EUY having G.C.E (A/L) qualification is significantly less than that of G.C.E. (O/L) qualification. Of the residential sector, the highest unemployed rate (78%) was found in the estate sector. When all the seven variables were considered simultaneously using Binary logistic model, only gender, religion, marital status, education attainment and residential sector were found significant on EUY. The overall correct classification rate of the Binary Logistic model is 76.2%. When only two way interactions were considered, the model was found to be significant based on Hosmer and Lemeshow statistic (p=0.460) and the overall correct classification was improved to 77.1%. The significant interaction was found between gender and education attainment, religion, marital status and English literacy. The percentage of married male EUY is significantly lower than that of unmarried male, but the percentage of EUY is almost same for females irrespective of marital status. The lowest percentage of EUY was noted for males having G.C.E (A/L). The percentage of male EUY who are unable to read and write is almost the same than that of males who are able to read and write, percentage of female EUY is much higher among those unable to read and write than that of able to read and write. The inferences derived in this study can effectively be utilized to reduce the EUY in Sri Lanka.

Keywords: Educated Youth, Labour Force, Logistic Regression, Two Stage Stratified Sampling, Unemployment.

CHAPTER 1

INTRODUCTION

1.1 Background

In the global context, the problem of unemployment has been a deeply rooted problem. This is due to various factors such as discrimination and inequalities on the basis of social class and status, ethnicity, gender etc (UNDP, 2015). Women are most likely to expose to the issue of gender inequality, which reduces their active participation in labour force. It has been estimated that all the Asian countries have incurred a loss of (42 - 47) USD billion per year with the restrictions on women's engagement in employment opportunities (UNESCAP, 2016).

Sri Lanka is considered to be a Lower Middle-Income country with a GDP per capita of USD 3,835 in 2016 with an entire population of 21.2 million people (Central Bank Report, 2017). Further, the country has been ranked 73rd out of 187 countries with regard to the Human Development Index (HDI) in 2013 with an HDI of 0.750 and an inequality-adjusted HDI of 0.643. In the Gender Inequality Index (GII), Sri Lanka was placed at 75th position with a GII of 0.383 (UNDP, 2014).

At the end of the 30 years of civil war in 2009, Sri Lankan economy has been grown with an average of 6.2% over the period from 2010 to 2016 and the services sector has contributed for 60% of the GDP in 2016 (Central Bank Report, 2017). Over the past three decades, youth unemployment has been recognized as a serious problem in Sri Lanka, which has negatively influenced on the overall productivity and the economic development of the country (Central Bank Report, 2017).

1.2 Youth Unemployment in Sri Lanka

According to the Department of Census and Statistics, unemployment has been defined as those people who are available and or looking for work, and who did not work and have tried out to find a job within the last four weeks and waiting to accept a job within next two weeks. Sri Lankans have been struggling with the problem of youth unemployment since 1960s. The problem of increasing the youth unemployment rates have been further confirmed by the following labour force statistics obtained from the Department of Census and Statistics as shown in Table 1.1.

Year	2011	2012	2013	2014	2015	2016
Males	12.8	14.0	15.6	16.1	16.6	17.1
Females	25.0	23.5	23.5	27.5	27.4	29.2
Total	17.2	17.2	19.2	20.3	20.8	21.6

Table 1.1: Youth unemployment rates in Sri Lanka (2011-2016)

Source: Department of Census and Statistics (2011-2016)

As indicated in the above Table 1.1, among the youth population, unemployment rates of males have increased from 12.8% (in 2011) to 17.1% (in 2016), while the female unemployment rates have also increased from 25% (in 2011) to 29.2% (in 2016). Thus, it is clear that female unemployment rates are higher than that of males in all the years.

1.3 Distribution of Youth Unemployment by Provinces

The variation of the rate of youth unemployment between provinces is generally higher than the variation between years within the province (Table 1.2).

Province	2011	2012	2013	2014	2015	2016
Western	14.3	14.6	16.9	14.3	15.9	14.7
Central	22.4	19.4	25.4	23.9	25.5	26.0
Southern	22.5	24.4	25.6	28.4	27.9	30.3
Northern	15.4	18.9	17.7	19.1	18.8	24.7
Eastern	20.4	20.8	14.8	16.4	21.7	20.1
North Western	14.1	17.8	13.9	21.3	15.2	16.0
North Central	10.0	12.8	15.2	13.6	16.3	19.7
Uva	13.1	12.6	14.9	21.1	22.0	24.8
Sabaragamuwa	20.8	17.1	27.3	30.9	29.6	30.0

Table 1.2: Youth unemployment rates by provinces (2011-2016)

Source: Department of Census and Statistics (2011-2016)

Further, it indicates that Southern province has the highest youth unemployment rate in all the years (Table 1.2).

1.4 Distribution of G.C.E. (O/L) & G.C.E. (A/L) Passed Percentages

The results in Table 1.3 indicates the educational qualifications obtained by the Sri Lankan youth during the period of 2011 to 2016. These percentages were computed with respect to the total number of candidates sat for the examination.

Table 1.3: Percentage of candidates who passed G.C.E. (O/L) and G.C.E. (A/L) Examinations (2011-2016)

Year	2011	2012	2013	2014	2015	2016
Passed G.C.E. O/L Examination	60.8	64.74	66.67	69.02	69.33	69.94
Passed G.C.E. A/L Examination		63.15	58.56	61.25	62.35	63.36

Source: Department of Examinations (2011-2016)

These results very clearly indicate that more than 60% was able to successfully get through these examinations. Although the majority of the Sri Lankan youth is educated, they do not have enough employment opportunities in the job market and this has been further confirmed by the following labour force statistics obtained from the Department of Census and Statistics in 2016 (Table 1.3).

Table 1.4: Youth unemployment rates with respect to their level of education (2011-2016)

Year	2011	2012	2013	2014	2015	2016
G.C.E. O/L	18.3	20.5	21.9	22.8	23.9	22.4
G.C.E. A/L and above	33.9	30.6	33.5	31.3	34.0	32.5

Source: Department of Census and Statistics (2011-2016)

According to the Table 1.4, youth unemployment rates are higher among the educated group with G.C.E. A/L and above educational qualifications than those who obtain G.C.E. O/L qualification. Therefore, this study focuses on identifying the factors affecting the unemployment of educated youth with G.C.E O/L and G.C.E. A/L qualifications.

1.5 Ratio of the Youth Unemployment Rates to Adult Unemployment

Below Table 1.5 illustrates the ratio of the youth unemployment rates to adult unemployment rates in Sri Lanka over the period 2011 to 2016.

 Table 1.5: Ratio of the youth unemployment rates to the adult unemployment rates in Sri

 Lanka (2011-2016)

Year	2011	2012	2013	2014	2015	2016
Males	10.8	11.2	11.1	10.8	12.8	15.3
Females	6.0	6.4	6.5	7.5	5.7	7.2

Source: Department of Census and Statistics (2011-2016)

As shown in Table 1.5, the ratio of the youth unemployment rate to the adult unemployment rate of males ranges from 10.8 to 15.3 while range of females is in between 6.0 to 7.2. In addition, the ratio above one indicates that youth unemployment is significantly higher than the adult unemployment. The corresponding rates by provinces are shown in Table 1.6.

Provinces	Percentage
Sabaragamuwa	64.1
Uva	59.7
Nothern	59.6
North Central	58.7
Southern	56.2
North Western	53.4
Western	53.0
Central	51.8
Eastern	50.9
Sri Lanka	55.9

Source: Department of Census and Statistics (2016)

Figures in Table 1.6 clearly indicates that the corresponding proportions in Sabaragamuwa, Uva, Northern, North Central and Southern provinces are higher than the national proportion of 55.9%, however in all the provinces this ratio is higher than 50%.

1.6 NEET Rate

The Table 1.7 indicates the gender composition of the youth NEET (Rate of youth not in employment, education and training) Rate during the period 2011 to 2016.

Year	2011	2012	2013	2014	2015	2016
Males	13.0	12.7	17.0	17.6	16.3	17.0
Females	33.4	34.7	35.5	37.4	34.6	34.5

Table 1.7: NEET rate as a percentage to total youth by gender (2011 - 2016)

Source: Department of Census and Statistics (2011-2016)

Accordingly, the percentage of the females who are not in employment, education or training is comparatively higher than that of males over the period from 2011 to 2016.

Table 1.8: NEET rate as a percentage to total youth by educational qualifications (2016)

Educational Qualifications	Males	Females
G.C.E. O/L	13.2	26.7
G.C.E. A/L and above	22.8	34.7

Source: Department of Census and Statistics (2016)

Results in Table 1.8 indicates that female NEET rate is higher from that of male for both the education groups. The lowest NEET rate is reported for the group with G.C.E. (O/L) level of education for both males and females.

All the above results highlighted that although the majority of the Sri Lankan youth is educated, they do not get enough opportunities in the labour market. Therefore, this research study is aimed in identifying the factors affecting the unemployment of the educated youth with G.C.E. O/L and G.C.E. A/L qualifications in Sri Lanka.

1.7 Research Objectives

On view of the above explanation, the objectives of the study are to:

- Identify the significant factors that influence on the educated unemployed youth with G.C.E. O/L qualifications and above.
- > Develop a predictive model for the educated unemployed youth.

1.8 Outline of the Dissertation

The dissertation will be organized with six chapters as follows. The Chapter 1 includes the introduction of the study; the Chapter 2 consists with both national and international studies related to the research topic carried out previously. The Chapter 3 explains information about the data and the statistical methodologies used for the study. The Chapter 4 gives the basic statistical analysis of the variables under each scenarios separately. The development of the predictive model using the four methods are discussed in Chapter 5. The Chapter 6 provides the conclusion from the data analysis along with the appropriate recommendations.

CHAPTER 2

LITERATURE REVIEW

This chapter consists of detailed investigation of the previous studies related to the unemployment of educated youth in Sri Lanka and other countries.

2.1 Factors Influencing on Women Unemployment in Sri Lanka

In the Sri Lankan labour force, the participation of females are less in comparison to males. As stated in the World Bank report in 2017, less representation of females in the labour force was mainly due to socio cultural factors, mismatching skills and gender discrimination practices. These factors were elaborated further in the following sections.

2.1.1 Impact of Socio-cultural factors on Unemployment

Firstly the household roles and responsibilities of women especially when they get married at young ages, they are less likely to engage in the labour force. According to 2015 statistics, marriage persons indicated a lower percentage (4.4%) in the odds of Female Labour Force Participation (FLFP), while men's participation was comparatively high (11%). In the early stages before 2010, married women with small children showed a less chance of becoming a paid employee and also there earnings were less with compared to the men (World Bank, 2017).

Based on the study conducted using a sample size of 150 by Gunatilaka (2013), due to certain cultural beliefs and norms, females are supposed to engage in in-house activities. This may cause for the reasons for gender gap in LFP by women. This study claimed that 70% of the married women in Sri Lanka are having at least 1 child under the age of 5 and are less likely to engage in work rather than spending their time at homes. This rate is comparatively higher (75%) with women in the urban areas than in the rural areas (71%). The study also revealed that the married females who are the heads of households have certain cultural constraints such as status-related perceptions, attitudes regarding their roles as married women and the gender division of household and care labour within the family unit. But the problem is, with

all these constraints they are encouraged to seek for employment, although there were some restrictions imposed by the private sector on the nature and type of work that women were able to take up (Gunatilaka, 2013).

A study conducted based on 200 households who are having at least one pre-school child in urban areas, by Gunathilaka (2010) suggested that non market work of women is not depending on their husband's income, but rather on the proportion of household activities and child care of their adults in the household. If these women can share their house work and child caring services with others, they are most likely to engage in the labour force. There are several factors influencing on the decision of getting formal child care such as the age of their children, household income, cost of the day care centers, quality of child care etc. Therefore, it's not simply the availability of those service providers but the quality and the affordability really affects the participation of the females in the labour force.

2.1.2 Impact of Education on Unemployment

Mismatching skills with respect to the availability of jobs is another reason for the increase in unemployment. Qualitative studies revealed that majority of the Sri Lankan women are preferred to continue their higher studies in the subject areas like humanities and arts but in the job market, there are more demand and job opportunities available for the people who continue their studies in the subject areas like Information Technology and Management (World Bank, 2017). Furthermore, it confirms with the following Table 2.1 that indicates the number of candidates who passed from G.C.E A/L examination and qualified to enter into any higher educational institute with respect to different subject streams.

Subject		2014			2015		2016		
Stream	No. Qualified	No. Admitted	% Admitted	No. Qualified	No. Admitted	% Admitted	No. Qualified	No. Admitted	% Admitted
Arts	68,565	8,617	12.57	65,511	9,891	15.1	64,218	9,418	14.67
Commerce	40,602	5,299	13.05	40,918	5,441	13.3	38,768	5,793	14.94
Physical Science	15,634	5,287	33.82	15,809	5,374	33.99	18,211	6,023	33.07
Biological Science	23,419	6,316	26.97	24,877	6,288	25.28	25,876	7,032	27.18
Other	1,352	124	9.17	1,582	210	13.27	2,020	324	16.04
Total	149,572	25,643	17.14	155,550	29,055	18.68	160,517	30,662	19.1

Table 2.1: Percentage of candidates admitted for the higher educational institutions with respect to different subject streams (2014 – 2016)

Source: University Grants Commission (2018)

According to the Table 2.1, it can be seen that the highest number of persons qualified are from Arts followed by Commerce irrespective of years. However, the percentage of admitted persons is high among Physical Science stream followed by Biological Science stream.

D - 1-	Occupation	201	5	201	6	2017		
Rank	Occupation	No	%	No	%	No	%	
1	Sewing Machine Operators	297,627	32.7	240,688	27.3	188,117	28.4	
2	Security Guards	179,284	19.7	171,135	19.4	114,370	17.3	
3	Other Manufacturing Labourers	100,282	11.0	107,594	12.2	84,629	12.8	
4	Representatives	78,634	8.6	79,348	9.0	52,344	7.9	
5	Shop Sales Assistants	33,844	3.7	45,158	5.1	30,206	4.6	
6	Cleaners and Helpers in Offices, Hotels and Other Establishments	24,783	2.7	26,008	2.9	28,024	4.2	
7	Manufacturing Supervisors	29,185	3.2	32,861	3.7	26,073	3.9	
8	General Office Clerks	20,442	2.2	23,117	2.6	20,410	3.1	
9	Tailors, Dressmakers, Furriers and Hatters	19,276	2.1	22,528	2.6	16,617	2.5	
10	Stall and Market Salespersons	11,217	1.2	16,378	1.9	13,878	2.1	
11	Hand Packers	14,745	1.6	14,444	1.6	12,916	1.9	
12	Mechanical Engineering Technicians	16,933	1.9	14,267	1.6	9,646	1.5	
13	Secondary Education Teachers	7,588	0.8	9,438	1.1	9,558	1.4	
14	Stock Clerks	9,764	1.1	10,511	1.2	8,902	1.3	
15	Sewers, Embroiders and Related Workers	12,269	1.3	13,768	1.6	8,249	1.2	
16	Information and Communication Technology Operation Technicians	8,664	1.0	9,406	1.1	8,128	1.2	
17	Textile, Leather and Related Pattern Makers and Cutters	12,422	1.4	10,502	1.2	8,039	1.2	
18	Sales Workers NEC	6,601	0.7	10,437	1.2	7,848	1.2	

Table 2.2: Distribution of top 20 occupations on total recruitments (2015 - 2017)

D 1		201	2015		6	2017	
Rank	Rank Occupation		%	No	%	No	%
	Accounting and Book Keeping						
19	Clerks	13,101	1.4	13,087	1.5	7,815	1.2
20	Civil Engineering Labourers	13,408	1.5	11,026	1.3	7,005	1.1
	Total (Top 20 Occupations						
	with respect to 2017)	910,069	100.0	881,701	100.0	662,774	100.0

Table 2.2: Distribution of top 20 occupations on total recruitments (2015 – 2017) (Continued)

Source: Department of Census and Statistics (2015-2017)

According to the Annual Labour Demand Survey (2017) carried out by the Department of Census and Statistics, majority of the workers are engaged as sewing machine operators followed by security guards over the period of 2015 to 2017. Therefore, it's clear that highly demanded occupations were in contrast with most of the students selected subject streams.

2.1.3 Impact of Training Courses on Unemployment

Although, the technical education and vocational training are considered to be important in improving the employability of job seekers, Gunatilaka (2008) found that most of these programs are not being able to provide the expected results. One reason she claimed is that these training sessions are conducted based on the Western province, where the unemployment rate is considerably less. Other reasons are: (i) these training programs are not updated with the expected level of standards (ii) inadequate teachers/ resource personnel and teaching aids and insufficient practical exposure.

Another important fact is that although most of these training programs are designed for those people who have completed their G.C.E.O/L examination, a considerable amount of participants were from those who are qualified with G.C.E. A/L examination. This confirms that their formal schooling had not prepared their students for the job market. That is one of the main reason for the existence of mismatching skills with respect to the availability in jobs (Gunatilaka, 2008).

2.1.4 Impact of Gender discrimination on Unemployment

Gender may be discriminated based on the nature of the job. Especially females are given less priority in the jobs related to the field of construction and IT based on its nature. At times in the hiring and recruitment process, less priority is giving for those who do not have contacts with the existing employees at the work place (World Bank, 2017).

A study conducted by Gunatilaka (2008) had shown that the majority of the Sri Lankan employed persons are engaged in the informal work arrangements and among them only about 6% are having permanent engagements. In comparison to females, males comprises a larger portion of the employed in the informal economy. The share of informal work is highest for both males and females in the age category of 15-19 age group. Nevertheless she claimed that in order to reduce the unemployment, informal job creation can make a direct impact by creating more employment opportunities than in the formal job creation.

2.2 Distribution of Unemployment in Asia-Pacific Countries

In the global context, several studies were carried out in relation to the factors influencing educated unemployment (Asian Development Bank, 2015). Most of such studies indicate that although the gaps between males and females on education and health have been reducing in the Asia Pacific countries, still there are wage gaps in the labour market due to the less participation of females because of the cultural and social norms. This confirms by the percentage of values of the labour force participation rates of different countries with respect to their gender (Figure 2.1).



Figure 2.1: Labour Force Participation in Different Countries

Source: World Bank (2017)

Figure 2.1, further indicates that the labour force participation of males is greater than the females who are in the age category of 15 years and above in all eight countries.



2.3 Distribution of Female Unemployment in Specific Countries

Figure 2.2: Female Labour Force Participation by Selected Country, Economic Status and Region (1993-2016)

Source: World Bank (2017)

According to Figure 2.2, Nepal, Sub Saharan Africa, Upper middle income countries, middle income countries and Malaysia indicate a higher rate in the Female labour force participation in comparison to Sri Lankan females. The Human Development Report (UNDP, 2015) indicates that women accounted for 52% of the world's work, which constitutes 52% of the work in the world and it's the total of 21% of the paid work and 31% of unpaid work. In contrast, men's total work consists of 38% of paid work, and only 10% of unpaid work. It is concluded that the women's share of the unpaid work is nearly three times that of men's unpaid work. The report of MGI (2015) states that if women were given equal chance as men in the labour market 26% could be added to global annual GDP by 2025.

2.4 Distribution of Unemployment in World Scenarios

Following Table 2.3 indicates the statistics of the world unemployment during the year 2016 and predicted values for the years 2017 and 2018.

	Unemployment Rates (2016 -			Unemployment in Millions		
Country Grouping	2018)			(2016 - 2018)		
country crouping	2016	2017	2018	2016	2017	2018
	Actual	Predicted	Predicted	Actual	Predicted	Predicted
World	5.7	5.8	5.8	197.7	201.1	203.8
Developed Countries	6.3	6.2	6.2	38.6	37.9	38.0
Emerging Countries	5.6	5.7	5.7	143.4	147.0	149.2
Developing Countries	5.6	5.5	5.5	15.7	16.1	16.6

Table 2.3: Unemployment Trends and Projections (2016 - 2018)

Source: International Labour Organization (2017)

As indicated in Table 2.3, unemployment rate was 6.3% in the developed countries, 5.6% in emerging countries and developing countries in 2016. The overall global unemployment rate is 5.7% and it's expected to rise by 0.1% in 2018. The details of the unemployment rates in Asia and the Pacific Region during the year 2016 and predicted values for the year 2017 and 2018 are shown in Table 2.4.

	Unemployment Rates			Unemployment in Millions			
Country/Region	(2016 - 2018)			(2016 - 2018)			
	2016	2017	2018	2016	2017	2018	
Asia and the Pacific	4.2	4.2	4.3	84.4	85.4	86.5	
Eastern Asia	4.5	4.5	4.5	41.6	41.9	42.4	
China	4.6	4.6	4.7	37.3	37.6	37.9	
Japan	3.1	3.0	3.0	2.0	1.9	2.0	
Korea, Republic of	3.7	3.6	3.7	1.0	1.0	1.0	
South-Eastern Asia							
and the Pacific	3.8	3.8	3.9	13.3	13.7	14.0	
Australia	5.7	5.5	5.3	0.7	0.7	0.7	
Indonesia	5.6	5.8	5.9	7.1	7.4	7.7	
Southern Asia	4.1	4.1	4.1	29.5	29.8	30.2	
India	3.5	3.4	3.4	17.7	7.8	18.0	

Table 2.4: Unemployment Trends and Projections in Asia and the Pacific Region (2016-2018)

Source: International Labour Organization (2017)

According to Table 2.4, it is proved that in 2016 the overall unemployment rate in the Asian and the Pacific Region was 4.2%. In the Eastern Asia the unemployment rate was 4.5%, in the South-Eastern Asia and the Pacific the rate was 3.8% and in Southern Asia the unemployment rate was 4.1%. Psacharopoulos and Tzannatos (1989) found that factors such as age, fertility and religion affect the Labour Force Participation Rate (LFPR) irrespective of the country that is considered. Additionally, Uwakwe (2004) stated that in Nigerian family responsibilities, pregnancy, and physical factors such as nutrition, water and health services are significantly influential factors on LFPR.

In Turkey, State and Planning Organization and the World Bank (2010) found that the FLFP is due to both socioeconomic and cultural factors such as household responsibilities, childcare/eldercare, urbanization and marital status. According to Faridi et al. (2009), factors like close relatives' educational status, household assets, spouse participation in economic activities, number of children, age of children and husband salary influence the female's decision on whether to participate or not participate in the labor market.

According to a study carried out in Pakistan by Khadim and Akram (2013) broadly identified three categories of factors that directly influences on the labour force participation in economic activity such as individual and demographic factors as age, education, marital status, socio economic condition factors as per capita income of the household, number of dependents, household type, geographic location factors as whether in urban and rural residences. According to the past trends, the labour force participation of women within the age group of 15-64 over the past two decades have declined from 57% to 55% worldwide. Participation of women in the Middle East and North African countries are lesser than 25%. As estimated by Gallup, within the South Asian region men are having twice of the opportunity than women to engage in full time jobs (World Bank, 2017).

Due to certain gender specific constraints in comparison to male farmers, female farmers are less active in commercial farming and more likely to have lower output per unit of land. In the area of Central Highlands of Ethiopia, their output value of per hectare of the female headed households have been estimated 35% lesser in comparison to the male headed households According to a research findings of ILO, women who are in paid work earn less than 10% - 30% on average with compared to men in 83 countries. These gaps are more in Middle East, North African and in OECD countries (ILO, 2017).

As stated by Amin and Alam (2008) in Malaysia the Muslim women whether they are married or not were significantly less likely to work for any payment rather than Buddhists and Hindus. As the single women living in the urban areas were not interested in engage in the work force, there was no significant difference in urban married women of different religions are working for payment.

Developing and middle income countries like Mexico, Columbia, Argentina, Brazil, states of India use subsidies to or public provision of child care and they are willing to bear the cost of women when they are involved in economic activities in their households. Further, several studies have found that subsidized childcare and free kindergarten facilities, combined with the transformation of public kindergarten from part-time to full-time, are having a significant influence on the labour force participation decision of mothers with preschool children (Baker, Glyn, & Howell, 2005).

2.5 Summary of the Chapter 2

In the local context, household duties and responsibilities, certain cultural beliefs and social norms, mismatching skills with the availability of jobs, gender discrimination in job search, hiring and promotion process have been identified as the primary reasons for the labour force participation decision resulted in the increase of unemployment. Similarly, in the global context, age and fertility, religion, physical factors like nutrition and health conditions, cultural factors like household responsibilities, childcare, eldercare, urbanization, marital status, number of children, age of children, husbands' salary influences on the labour force participation decision of especially in women. However, no specific studies was found for the reasons of unemployment of youth having G.C.E. (O/L) & G.C.E. (A/L) educational qualifications.

CHAPTER 3

MATERIALS AND METHODS

3.1 Materials

3.1.1 Secondary Data

For this study, data were obtained from Sri Lanka Annual Labour Force Survey in 2016 conducted by the Department of Census and Statistics, Sri lanka. The survey has been carried out from January to December in 2016, using a sample of 25,750 housing units which includes 85,082 individuals. Further, this provides the estimates of national, provincial and district level during the reference period of 2016. This survey has collected information on demographic characteristics of the usual residents of the household economically active and inactive conditions, employment and unemployment characteristics, underemployment and informal sector employment information.

3.1.2 Sampling Methodology of the LFS

The annual labour force survey is conducted by using the two stage stratified sampling technique and selected a sample of 25,750 housing units. It indicates the persons who are only living in housing units and excludes the institutional population. For the sampling frame, Census of Population and Housing in 2012 has been used. Here, the census blocks prepared for the Census of Population and Housing in 2012 have been selected as the primary sampling units and the secondary sampling units are the housing units selected from the 2575 primary sampling units. By using the method of systematic random sampling, from each of the selected primary sampling unit, 10 housing units (SSU) are selected for the survey.

By using the Neymann allocation method, Primary Sampling Units (PSUs) of 2575 were allocated to each district and to each sectors (Urban, Rural and Estate). Then the sample which is allocated for each district is equally distributed among 12 months (DCS, 2016).

Following Table 3.1 indicates the distributions of the sample by district for the year 2016.

District	No of Housing Units	District	No of Housing Units
Colombo	2850	Kilinochchi	400
Gampaha	2400	Batticaloa	820
Kalutara	1450	Ampara	900
Kandy	1500	Trincomalee	600
Matale	700	Kurunegala	1750
Nuwara Eliya	900	Puttalam	800
Galle	1400	Anuradhapura	850
Matara	1250	Polonnaruwa	650
Hambantota	900	Badulla	850
Jaffna	750	Moneragala	650
Mannar	370	Ratnapura	1150
Vavunia	400	Kegalle	1100
Mullaitivu	360	Total	25750

Table 3.1: Sample allocation by District (2016)

Source: Department of Census and Statistics (2016)

Table 3.2, illustrates an outline of the Labour Force Survey Data in 2016 obtained from the Department of Census and Statistics.

Table 3.2: Descriptive statistics extracted from Sri Lanka Annual Labour Force Survey

(2016)

	Estimate	0/	Standard	Coefficient
Labour Force Characteristics			Error	of Variation
Population (15 years & above)	15,448,679	100	98,235	0.64
Labour Force	8,310,682	100	66,023	0.79
Inactive	7,137,997	100	57,995	0.81
Employed	7,947,683	100	64,616	0.13
Unemployed	362,999	100	11,186	3.08

Source: Annual Labour Force Survey (2016)

According to the Table 3.2, the estimated total population in 2016 was 15,448,679 and estimated labour force of the country was 8,310,682 and further these results indicate that the estimated employed total population was 7,137,997 while the unemployed population amounting to 362,999.

Out of the entire population, 85,082 of individuals were selected for the Annual Labour Force Survey in 2016 and this analysis is carried out based on 4,002 individuals those who are among the youth within the age category of (15-24) and qualified with the G.C.E. O/L and G.C.E. A/L Academic qualifications.

3.1.3 Variables Used for the Analysis

Following Table 3.3 indicates a list of variables selected for the analysis.

Vari	ables	Code
Condor V1	Male	1
Gender - Al	Female	2
	Sinhala	1
\mathbf{P}_{aba} V)	Tamil	2
Race - A2	Malay	3
	Other	9
	Buddhist	1
Religion - X3	Hindu	2
	Muslim	3
	Other	9
	Single	1
Marital Status – X4	Married	2
	Other	3
Education Attainment V5	Passed G.C.E. O/L	1
Education Attainment – AS	Passed G.C.E.A/L	2
Literacy in English X6	Ability to read and write	1
Enteracy in Elignish - X0	Unable to read and write	2
	Urban	1
Residential Sector - X7	Rural	2
	Estate	3

Table 3.3: List of Variables used for the analysis

3.1.4 Concepts and Definitions

The concepts and definitions used by the Department of Census and Statistics to disseminate labour force information will be used for this study. The recommended statistical definitions are as follows.

- Labour force: The labour force comprises of the economically active population with the age of 10 and over during the reference period. (Usually one week, the inquiry relates to activity or status is referred in the preceding week of the survey week.) Officially the Department of Census and Statistics used the lower age limit as 10 up to 2012 but a very small number of cases are reported in 10-14 age groups therefore from 2013 lower age limit as age 15 and above is considered as the working age population and upper age limit is not defined.
- Economically Active Population: These are the persons who are/were employed or unemployed in the survey reference period.
- Employed: These are the persons who worked as paid employees, employers, own account workers (self-employed), or unpaid family workers are said to be employed in the reference period. These indicate persons with a job but not at work during the reference period.
- Unemployed: These are the persons who are seeking and available for work, but had no employment during the reference period.
- Currently Economically Active: These persons were employed or unemployed during the current reference period are considered as currently economically active.
- Not in the Labour Force (not economically active): These are the persons who are categorized as "not in the labour force" are neither working not available/ looking for work. Persons who are not in the labour force are due to causes such as full time care of the household, full time students, retired or old age, infirmed or disabled, or are not willing to work for any of the reasons (DCS, 2016).

3.2 Statistical Techniques Used

3.2.1 Analysis of 2-way Freq. Tables

In typical two factors (A & B) having 2 levels can be illustrated as shown below.

А	В	Total	
	B_1	B ₂	Total
A ₁	f ₁₁	f ₁₂	f _{1.}
A ₂	f ₂₁	f ₂₂	f _{2.}
Total	f _{.1}	f.2	f

Table 3.4: Two way Frequency Table

Let $\{f_{ij}\}$ = Observed frequency of the row category = i and column category = j

Hypotheses

H₀: Factor A is independent of factor B or there is no significant association between the two factors A and B.

H₁: There is a significant association between the two variables.

3.2.2 Tests used for the analysis of 2-D table

The three common statistics used to test the above hypothesis are based on 2 way frequency table.

> Pearson's Chi-Square Test (exact) =
$$\chi^2 = \sum \frac{(Observed - Expected)^2}{Expected}$$
 3.1

> Yates Correction Chi-Square Test =
$$\sum \frac{(Observed - Expected - 0.5)^2}{Expected}$$
 3.2

> Likelihood Ratio = $\sum Observed * log\left(\frac{Observed}{Expected}\right)$ 3.3

Each statistic is distributed $\chi^2_{(r-1)(c-1)}$ where r and c are the number of rows and columns. *Source: Peiris (2018)*

3.2.3 Binary Logistic Regression Analysis

The goal of logistic regression is to predict the dichotomous characteristic of dependent variable based on the continuous and/ or categorical independents and to identify the variability of the dependent variable on the basis of the independents, to rank the relative importance of independents, to assess the interaction effects, and to measure the impact of covariate control variables. Logistic regression comes under the family of generalized linear models. The impact of predictor variables is usually explained in terms of odd ratios.

Odd Ratios

The odds are simply the ratios of the proportions for the two possible outcomes of the binary logistic regression. If p is the proportion of the event outcome then (1-p) is the proportion for the next outcome and the odds of an event is defined as,

$$Odds = \frac{p}{1-p}$$
 3.4

The log transformation of p is also called as the logit of p or logit (p) and thus it is defined as,

$$\text{Logit}(p) = \text{Log}\left(\frac{p}{1-p}\right)$$
 3.5

Logistic regression uses maximum likelihood estimation by changing the dependent in to logit variable. Estimation in logistic regression chooses parameters that maximize the likelihood function. Continuous variables are not taken as dependent variables in logistic regression and also only one dependent variable can exists.

Binary logistic regression is a branch of logistic regression which is used when the dependent is a dichotomous. Assume X_{1i} , X_{2i} X_{ki} are the explanatory variables for the ith individual. The response is a dichotomous variable having two outcomes. Then the binary logistic model gives the relationship between the response and explanatory variables as follows.

$$Log\left(\frac{p_{i}}{1-p_{i}}\right) = \beta_{0} + \beta_{1}x_{1i} + \beta_{2}x_{2i} + \dots + \beta_{k}x_{ki}$$
 3.6

Where i = 1, 2, ..., n $X_{i0} = 1$ for all i = 1, 2, ..., n

 p_i is the probabilities of occurrence of the response of the interest of the ith individual. The model can alternatively be expressed in the form of,

$$p_{i} = \frac{\exp(\beta_{0} + \beta_{1}x_{1i} + \beta_{2}x_{2i} \dots + \beta_{kx}x_{ki})}{1 + \exp(\beta_{0} + \beta_{1}x_{1i} + \beta_{2}x_{2i} \dots + \beta_{kx}x_{ki})}$$
3.7

Where i = 1, 2, ..., n (Peiris, 2018)

3.2.4 Variable Selection Methods in Binary Logistic Model

The four main methods that are used for the variable selection are as follows.

- Forward Selection (Likelihood Ratio) It's a stepwise selection method which uses the entry testing on the basis of the significance of the score statistic, and removal testing is done on the basis of the probability of a likelihood-ratio statistic which uses the maximum partial likelihood estimates.
- Forward Selection (Wald) It's a stepwise selection method which uses the entry testing on the basis of the significance of the score statistic, and removal testing is done on the basis of the probability of the Wald statistic.
- Backward Elimination (Likelihood Ratio) It's Backward stepwise selection method which uses the removal testing on the basis of the probability of likelihood ratio statistic and uses the maximum partial likelihood estimates.
- Backward Elimination (Wald) It's a backward stepwise selection method which uses the removal testing on the basis of the probability of the Wald statistic (Peiris, 2018).

3.2.5 Model Selection Procedure

Forward selection method (Likelihood Ratio) is used to select the most suitable model. This method starts with the null model (simplest model only with the intercept). Then the most significant variable (main effect) is added to the model. The variable with the lowest p value (at a given significant level) is considered to choose the most significant variable. In this way by adding one variable at a time to the each new model, the finalized model is defined when there is no further improvement. Similarly, higher order interactions are added thereafter.

In order to assess the model fit,

H₀: The model fits the data vs H₁: Model does not fits the data

In order to test the significance of logistic regression model, following tests can be used.

• Deviance Test

In each of these competing models, both the null and the alternative models are separately fitted and at each step, log-likelihood statistic is computed as shown below. The test statistic is indicated by *D-Deviance* which is twice as the difference in these log-likelihoods.

$$D = -2\log\left(\frac{likelihood for null model}{likelihood for alternative model}\right) = 2\log(L)$$
3.8

Under H₀: $D \sim X^2_1$

D statistic is the difference of log likelihood between two models.

• Hosmer and Lemeshow Test

This statistical test is used to find out the goodness of fit for the logistic regression models. Most commonly it is used in the risk prediction model. The test identifies whether the observed data can be matched with the expected data under hypothetical model.

The test statistic H is given by,

$$H = \sum_{g=1}^{n} \frac{(O_g - E_g)^2}{N_g p_g (1 - p_g)}$$
3.9

 O_g – Number of observed cases in gth group

 E_g – Number of expected cases gth group under the fitted model

g – Number of groups

Hypotheses

H₀: Model is significant vs H₁: Model is not significant

Under H₀, the test statistic is asymptotically follows Chi-square g-2 df (Peiris, 2018).

CHAPTER 4

INFLUENCE OF THE SELECTED EXPLANATORY VARIABLES ON EDUCATED UNEMPLOYED YOUTH (EUY)

This section investigates the influence of each selected explanatory variable separately on EUY. The results of the statistical analysis and the interpretations are given in this chapter.

4.1 Influence of Gender on EUY

Following Table 4.1, shows the results of the analysis of 2-way frequency table between gender and EUY.

			Labour	Labour_Force	
			Yes	No	
Male Gender Fema	Mala	Count	515	1143	1658
	IVIAIE	% within Gender	31.1%	68.9%	100.0%
	Fomolo	Count	446	1898	2344
	remale	% within Gender	19.0%	81.0%	100.0%

Table 4.1: Influence of Gender on EUY

Chi Square test statistic $-\chi^{2}_{(1)} = 77.075 \text{ (p=0.000)}$

As the chi square test statistic (77.075) is highly significant (p=0.000), it can be concluded that there is a significant influence of gender on EUY. Among the educated female youth, 81.0% of females are not in the labour force (unemployed) and among the educated male youth, 68.9% of males are not in the labour force (Table 4.1). Nevertheless, as chi square is significant, it can be concluded that the percentage of educated female unemployed youth is significantly higher than the percentage of educated male unemployed youth in Sri Lanka.

4.2 Influence of Race on EUY

The results of 2- way frequency table between race and EUY are shown in Table 4.2.

			Labour	_Force	Total
			Yes	No	
	Sinhala	Count	709	2105	2814
	Similaia	% within Race	25.2%	74.8%	100.0%
Τ	Tomil	Count	156	582	738
Baaa	Tarrii	% within Race	21.1%	78.9%	100.0%
Race	Molov	Count	94	345	439
	walay	% within Race	21.4%	78.6%	100.0%
	Other	Count	2	9	11
Other	Other	% within Race	18.2%	81.8%	100.0%

Table 4.2: Influence of Race on EUY

Chi Square test statistic - $x^{2}_{(2)} = 7.331 \text{ (p=0.062)}$

As the results of the Chi Square statistic (7.331) is not significant (p>0.05), it can be concluded that there is no significant influence of race on EUY. Thus, it can be concluded that the percentage of educated unemployed youth is significantly different among races. The lowest percentage (74.8%) can be seen among Sinhalese while the highest percentage (81.8%) is among different races other than Sinhala, Tamil or Malay.

4.3 Influence of Religion on EUY

Below Table 4.3, shows the results of the analysis of 2-way frequency table between religion and EUY.

			Labour	_Force	Total
			Yes	No	
	Buddhiat	Count	649	2000	2649
	Dudunisi	% within Religion	24.5%	75.5%	100.0%
	Llindu	Count	105	463	568
Deligion	ninau	% within Religion	18.5%	81.5%	100.0%
Religion	Mueline	Count	92	342	434
	WUSIIM	% within Religion	21.2%	78.8%	100.0%
C	Other	Count	115	236	351
	Other	% within Religion	32.8%	67.2%	100.0%

Table 4.3: Influence of Religion on EUY

Chi Square test statistic - $\chi^2_{(3)} = 26.468 \text{ (p=0.000)}$

The result of the Chi Square statistics (26.468, p = 0.000) confirms that there is a significant influence of religion on EUY. Thus, it can be concluded that the percentage of educated unemployed youth is significantly different among religions. The corresponding percentages among Buddhists, Hindus, Malays and others are 75.5%, 81.5%, 78.8% and 67.2% respectively. (Table 4.3).

4.4 Influence of Marital status on EUY

Following Table 4.4, shows the results of the analysis of 2-way frequency table between marital status and EUY.

-			Labour_Force		Total
			Yes	No	
	Single	Count	836	2684	3520
	Single	% within Marital_Status	23.8%	76.3%	100.0%
	Married	Count	124	351	475
wantal_Status		% within Marital_Status	26.1%	73.9%	100.0%
	Other	Count	1	6	7
		% within Marital_Status	14.3%	85.7%	100.0%

Table 4.4: Influence of Marital status on EUY

Chi Square test statistic - $\chi^2_{(4)}$ = 11.673 (p=0.441)

The results of the chi square statistics (11.673, p = 0.441) confirms that there is no significant influence of the marital status on EUY. Among the educated youth of singles, 76.3% of the majority are not in the labour force and among the married educated youth 73.9% are not in the labour force. As chi square is not significant, it can be concluded that marital status is not significantly influence on the educated youth unemployment irrespective of the gender (Table 4.4).

4.5 Influence of Educational Attainment on EUY

The results of 2-way frequency table between education attainment and EUY are shown in Table 4.5.

				Labour_Force		Total
				Yes	No	
		Count		368	1678	2046
	Passed G.C.E. (O/L)	%	within	18.0%	82.0%	100.0%
Education Attainment		Education_Attair	ment			
		Count		593	1363	1956
	Passed G.C.E. (A/L)	%	within	30.3%	69.7%	100.0%
		Education_Attain	ment			
		2				

Table 4.5: Influence of Educational Attainment on EUY

Chi Square test statistic - $\chi^{2}(5) = 83.327 \text{ (p=0.000)}$

The Chi Square test statistic is significant (p=0.000). Thus, it can be concluded that there is a significant influence of educational attainment on EUY. The percentage of educated youth unemployed among those who passed G.C.E. (O/L) examination (82.0%) significantly higher than that of those who passed G.C.E. (A/L) examination (69.7%) (Table 4.5).

4.6 Influence of Literacy in English on EUY

Below Table 4.6, shows the results of the analysis of 2-way frequency table between the literacy in English and EUY.

			Labour_	Labour_Force	
			Yes	No	
	Ability to road and write	Count	421	1216	1637
English_Literacy	Ability to read and write	% within English_Literacy	25.7%	74.3%	100.0%
	Unable to read and write	Count	540	1825	2365
		% within English_Literacy	22.8%	77.2%	100.0%
		2			

Table 4.6: Influence of Literacy in English on EUY

Chi Square test statistic - $\chi^{2}_{(6)} = 4.412 \text{ (p=0.036)}$

The results of the chi square test statistics (4.412, p=0.036) indicate that there is a significant influence of the level of English literacy on EUY. According to the Table 4.6, among the educated youth who have the ability to read and write, 74.3% are not in the labour force and among the youth who are unable to read and write, 77.2% are not in the labour force. As chi

square is significant, it can be concluded that among the English literate persons, the percentage of educated unemployed youth is significantly lower than the percentage of educated employed youth among non-English literate persons.

4.7 Influence of Residential Sector on EUY

The results of 2- way frequency table between residential sector and EUY is shown in Table 4.7.

			Labour_Force		Total
			Yes	No	
Residential _ Sector	Urban	Count	237	564	801
		% within Sector	29.6%	70.4%	100.0%
	Rural	Count	704	2406	3110
		% within Sector	22.6%	77.4%	100.0%
	Estate	Count	20	71	91
		% within Sector	22.0%	78.0%	100.0%
				1 1	

Table 4.7: Influence of Residential Sector on EUY

Chi Square test statistic - $\chi^{2}_{(7)} = 17.079 \text{ (p=0.000)}$

Results of the Chi Square statistics (17.079, p = 0.000) confirms that there is a significant influence of the living area on EUY. In the urban sector 70.4%, in the rural sector 77.4% and in the estate sector 78.0% are not in the labour force. It can be concluded that among the sectors, the percentage of educated unemployed youth in both rural and estate sector is significantly higher than that of in urban sector when each variable is considered separately.

4.8 Summary of the Chapter 4

The results of the Chi Square analysis confirmed that out of all the selected variables namely, gender, religion, education attainment, literacy level in English and residential sector have significant impact while race and marital status are not significantly impact on the unemployment of the educated youth in Sri Lanka. Furthermore, for each level of the above seven factors, the percentage of educated unemployed youth is higher than that of educated employed youth.

CHAPTER 5

MODELLING THE EDUCATED UNEMPLOYED YOUTH (EUY): LOGISTIC REGRESSION APPROACH

In this section, the effects of each of the selected seven variables have been analyzed simultaneously by using the binary logistic regression method. The seven variables are shown in Table 5.1.

Table 5.1. List of variables used in the model				
Variable	Variable Label			
Gender	X1			
Race	X2			
Religion	X3			
Marital Status	X4			
Education Attainment	X5			
Literacy in English	X6			
Residential Sector	X7			

Table 5.1. List of variables used in the model

The dichotomous variable is the labour force participation which indicates whether the youth is in the labour force or not.

0 If educated youth is in the labour force (employed)

In order to find out the significant variables, when all the variables considered simultaneously the following four approaches were carried out.

- Forward Selection (Likelihood) Method
- ➢ Forward Selection (Wald) Method
- Backward Elimination (Likelihood Ratio) Method

. . . .

Backward Elimination (Wald) Method
As similar results were obtained in all the four methods, only the results obtained in Forward Selection (Likelihood) Method is illustrated below.

5.1 Use Forward Selection (Likelihood) Method

The FS method is based on the likelihood ratio and the model starts only with the constant model. Then most influential variable is added to the model. This continues until there is no further improvements for the model. The reference groups used for the analysis is indicated in Table 5.2.

Variables	Reference Category
Gender (X1)	Female
Race (X2)	Other
Religion (X3)	Other
Marital Status (X4)	Other
Education Attainment (X5)	Passed G.C.E. (A/L)
Literacy in English (X6)	Unable to read and write
Residential Sector (X7)	Estate

Table 5.2: Reference Categories used for the model

5.1.1 Goodness of Fit of the Fitted Model for the Main Effects

The goodness of fit for the overall model can be discussed by using model Chi Square test. Table 5.3 and Table 5.4 show the results for the overall significance of the model.

Step	-2 Log likelihood	Cox & Snell R	Nagelkerke R
		Square	Square
1	4328.207 ^a	.021	.031
2	4230.149 ^a	.044	.067
3	4209.651 ^a	.049	.074
4	4195.495 ^a	.053	.079
5	4181.065 ^b	.056	.084

Table 5.3: Model Summary

These indicators sometimes known as Pseudo R^2 . It indicates the explained variation in the dependent variable based on the final model varies from 5.6% to 8.4% depending on Cox & Snell R^2 and Nagelkerke R^2 respectively (Table 5.3).

Step	Chi-square	df	Sig.	
1	.000	0		
2	23.802	2	.000	
3	22.069	6	.001	
4	24.573	7	.001	
5	27.309	8	.001	

Table 5.4: Results of Hosmer and Lemeshow Test

According to Table 5.4, the value given in the fourth column is the probability of the chi square statistic used to test the null hypothesis (H_0 : Model is significant) (Section 3.25, 25pg). In other words, this is the probability of obtaining this chi-square statistic (27.309) for goodness of fit of the model. In this case, the models in each steps are not significant as the corresponding p values are less than 0.05. This implies that the model can be further improved by including the interaction terms as discussed in section 5.2.

The SPSS output of the final model is shown in Table 5.5.

		В	S.E.	Wald	df	Sig.	Exp(B)
	Gender (X1)		<u>г</u>	<u>г</u>		<u>г</u>	
	Male	824	.080	106.965	1'	.000	.439
	Religion (X3)		1 1	20.605	3	.000	
	Buddhist	.343	.128	7.187	1'	.007	1.409
	Hindu	.679	.163	17.334	1'	.000	1.973
	Muslim	.573	.169	11.517	1'	.001	1.774
	Marital_Status (X4)		1 1	14.992	2	.001	1
Step 5 ^e	Single	561	1.129	.247	1	.619	.571
	Married	-1.016	1.134	.802	1'	.370	.362
	Education_Attainment (X5))	1 1	1 1	1		1
	Passed G.C.E. (O/L)	.780	.079	98.674	1'	.000	2.182
	Residential_Sector (X7))	1 1	15.354	2	.000	
	Urban	166	.281	.349	1	.555	.847
	Rural	.200	.275	.529	1'	.467	1.221
	Constant	1.286	1.157	1.234	1'	.267	3.618

Table 5.5: Final results of the Logistic Regression model via Forward Selection (LR) Method

According to Table 5.5, the fitted model can be written as follows;

$$Log\left(\frac{P}{1-P}\right) = 1.286 - 0.824 (x_{1=1}) + 0.343 (x_{3=1}) + 0.679 (x_{3=2}) + 0.573 (x_{3=3}) - 0.561 (x_{4=1}) - 1.016 (x_{4=2}) + 0.780 (x_{5=1}) - 0.166 (x_{7=1}) + 2.00 (x_{7=2})$$

According to the results in Table 5.5, it can be interpreted that there is a significant odds of educated males (0.439) who are unemployed compared to females. In comparison to the other category of religion, the most significant religion is Hindu (1.973) followed by Muslims (1.774) and Buddhists (1.409) who are among the unemployed educated youth. Odds of unemployed single youth is significantly higher (0.571) than those who are married (0.362). The results of the model indicates that the significant odds of unemployed youth who passed G.C.E. (O/L) examination (2.182) compared to those unemployed who passed the G.C.E. (A/L) examination. Further, the odds of educated unemployed youth representing the rural sector increases by 1.221 compared to those who are in the urban sector.

In order to check the goodness of fit of the model, predicted values were obtained at the critical level probability of 0.5 (Table 5.6).

			Predicte	Total	
			Yes	No	
	Vaa	Count	21	940	961
Lobour Force	res	% within Labour_Force	2.2%	97.8%	100.0%
Labour_Force	No	Count	14	3027	3041
		% within Labour_Force	0.5%	99.5%	100.0%
Total		Count	35	3967	4002
ισιαι		% within Labour_Force	0.9%	99.1%	100.0%

Table 5.6: Observed and Predicted results of the EUY

According to Table 5.6, 3027 are predicted correctly as unemployed (99.5%) and from 961 educated youth employed, 21 are predicted correctly as employed (2.2%). The overall correct classification by the model is $\frac{21+3027}{4002} = 76.2\%$

Based on the results obtained, it can be concluded that out of the selected seven variables, five variables are significantly influence on the educated youth unemployment and in order to study more details, 2-way interactions were tested by using the Forward LR method (Table 5.7).

5.2 Model with Two Way Interactions

In order to improve the model, the importance of the inclusion of interaction terms were pointed out in Section 5.1. However, the inclusion of all interactions make the model complicated. Therefore, higher order interactions were not considered. Furthermore among the ten possible 2-way interactions, only four 2-way interactions were identified by the model.

5.2.1 Goodness of Fit of the Fitted Model with Two Way Interactions

Table 5.7 and Table 5.8 indicate the results for the overall significance of the model.

Step	-2 Log likelihood	Cox & Snell R	Nagelkerke R
		Square	Square
1	4251.936 ^a	.039	.059
2	4137.147 ^a	.066	.099
3	4117.842 ^b	.071	.106
4	4097.599 ^b	.076	.113
5	4080.992 ^b	.079	.119
6	4067.485 ^b	.082	.124
7	4063.532 ^b	.083	.125

Table 5.7: Model Summary for Two way Interactions

According to Table 5.7, the explained variation in the dependent variable based on the final model varies from 8.3% to 12.5% depending on Cox & Snell R^2 and Nagelkerke R^2 respectively.

Table 5.8: Results of Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	.000	1	1.000
2	17.645	3	.001
3	.039	3	.998
4	6.793	7	.451
5	6.166	7	.520
6	6.775	7	.453
7	6.704	7	.460

Table 5.8 indicates the probability of obtaining this chi-square statistic (6.704) for goodness of fit of the model. In this case, the model is statistically significant as p=0.460 (p>0.05).

The SPSS output of the final model with 2-way interactions is shown in Table 5.9.

Table 5.9: Final	results of the	e Two way	<i>interactions</i>	via Forward	Selection	(LR)	Method
		J				· /	

•		В	S.E.	Wald	df	Sig.	Exp(B)
	Religion (X3)			33.712	3	.000	
	Buddhist	.412	.171	5.777	1	.016	1.509
Char	Hindu	1.109	.234	22.426	1	.000	3.032
step 7 ^g	Muslim	1.115	.253	19.349	1	.000	3.048
1	Education_Attainment (X5) Passed G.C.E.(O/L)	1,152	.120	91.562	1	.000	3,165
	Residential_Sector (X7)			15.831	2	.000	
	Urban	158	.288	.300	1	.584	.854
	Rural	.224	.281	.633	1	.426	1.251
	Gender (X1) * Education_Attainment (X5)						
	Male * Passed G.C.E. (O/L)	585	.168	12.130	1	.000	.557
	Gender (X1) * Religion (X3)			16.434	3	.001	
	Male * Buddhist	206	.257	.642	1	.423	.814
	Male * Hindu	853	.333	6.566	1	.010	.426
	Male * Muslim	-1.046	.352	8.814	1	.003	.351
	Gender (X1) * Marital_Status (X4)			62.352	2	.000	
	Male * Single	181	.257	.500	1	.480	.834
	Male * Married	-2.650	.401	43.641	1	.000	.071
	Gender(X1) * English_Literacy(X6)						
	Male * Able to read and write	.239	.121	3.919	1	.048	1.270
	Constant	.366	.310	1.396	1	.237	1.442

The fitted model with the two way interactions can be written as follows;

$$Log\left(\frac{P}{1-P}\right) = 0.366 + 0.412 (x_{3=1}) + 1.109 (x_{3=2}) + 1.115 (x_{3=3}) + 1.152 (x_{5=1}) - 0.158 (x_{7=1}) + 0.224 (x_{7=2}) - 0.585 (x_{1=1*} x_{5=1}) - 0.206 (x_{1=1*} x_{3=1}) - 0.853 (x_{1=1*} x_{3=2}) - 1.046 (x_{1=1*} x_{3=3}) - 1.181 (x_{1=1*} x_{4=1}) - 2.650 (x_{1=1*} x_{4=2}) + 0.239 (x_{1=1*} x_{6=1})$$

According to Table 5.9, it can be interpreted that there is a significant odds of unemployed educated males who are Buddhists (0.814) followed by male Hindus (0.426) and male Muslims (0.351) when females with other category are controlled. Similarly, it can be seen that there are more single youth males (0.834) than the married males (0.071) who are educated and not in the labour force. In addition, there is a significant amount of unemployed educated youth males in the rural sector (1.251) than the urban sector (0.854). Regarding the

education attainment, there's a significant amount of unemployed youth males who passed G.C.E. (O/L) examinations (0.557) compared to unemployed youth males who passed G.C.E. (A/L) examination. Similarly, more unemployed males are English literate (1.270) compared to females who are illiterate in English.

In order to check the goodness of fit of the model, predicted values were obtained at the critical level probability of 0.5 (Table 5.10).

			Predicte	Total	
			Yes	No	
	Vee	Count	59	902	961
	Yes	% within Y	6.1%	93.9%	100.0%
Observed	No	Count	13	3028	3041
		% within Y	0.4%	99.6%	100.0%
T . 4 . 1		Count	72	3930	4002
lotal		% within Y	1.8%	98.2%	100.0%

Table 5.10: Observed and Predicted results of the EUY

According to Table 5.10, 3028 are predicted correctly as unemployed (99.6%) and from 961 educated youth employed, 59 are predicted correctly as employed (6.1%). The overall correct classification by the model is $\frac{59+3028}{4002} = 77.1\%$

5.3 Summary of 2-way Interactions

As four 2-way interactions were found significant, it would be more appropriate to derive percentages from those tables than percentages based on main effects only.

X2 Deligion			Y = Labo	Y = Labour force		
				Yes	No	
		Malo	Count	334	780	1114
	¥1	IVIAIE	% within X1	30.0%	70.0%	100.0%
Ruddhict		Fomalo	Count	315	1220	1535
Budunist		remale	% within X1	20.5%	79.5%	100.0%
	Total		Count	649	2000	2649
	Total		% within X1	24.5%	75.5%	100.0%
		Male	Count	66	153	219
	¥1	Male	% within X1	30.1%	69.9%	100.0%
Hindu		Fomalo	Count	39	310	349
Tinidu		remale	% within X1	11.2%	88.8%	100.0%
	Total		Count	105	463	568
	Total		% within X1	18.5%	81.5%	100.0%
	¥1	Male	Count	62	119	181
		Male	% within X1	34.3%	65.7%	100.0%
Muelim		Female	Count	30	223	253
MUSIIII			% within X1	11.9%	88.1%	100.0%
	Total		Count	92	342	434
	Total		% within X1	21.2%	78.8%	100.0%
		Male	Count	53	91	144
	X1	Male	% within X1	36.8%	63.2%	100.0%
Other		Female	Count	62	145	207
Outer		1 cmaie	% within X1	30.0%	70.0%	100.0%
	Total		Count	115	236	351
	Total		% within X1	32.8%	67.2%	100.0%
		Male	Count	515	1143	1658
	X1	Male	% within X1	31.1%	68.9%	100.0%
Total		Female	Count	446	1898	2344
Total		remaie	% within X1	19.0%	81.0%	100.0%
	Total		Count	961	3041	4002
	10tai		% within X1	24.0%	76.0%	100.0%

Table 5.11: Influence of Gender and Religion on EUY

As indicated in Table 5.11, the percentage of male EUY rate is almost same irrespective of religion. However the percentage of female EUY rate among Hindu (88.8%) and Muslim (88.1%) religions are significantly higher than that of Buddhists (75.5%).

X4 = Marital status			Y = Labo	Total		
		-	•	Yes	No	
			Count	456	1129	1585
	×4	Male	% within X1	28.8%	71.2%	100.0%
<u>.</u>	X1		Count	380	1555	1935
Single		Female	% within X1	19.6%	80.4%	100.0%
	-		Count	836	2684	3520
	Iotal		% within X1	23.8%	76.3%	100.0%
			Count	59	13	72
	×4	Male	% within X1	81.9%	18.1%	100.0%
	X1		Count	65	338	403
Married		Female	% within X1	16.1%	83.9%	100.0%
	-		Count	124	351	475
	lotal		% within X1	26.1%	73.9%	100.0%
		Male	Count	0	1	1
	N/A		% within X1	0.0%	100.0%	100.0%
Others	X1	E a marta	Count	1	5	6
Other		Female	% within X1	16.7%	83.3%	100.0%
	Tatal		Count	1	6	7
	Total	-	% within X1	14.3%	85.7%	100.0%
		Mala	Count	515	1143	1658
	N/A	Iviale	% within X1	31.1%	68.9%	100.0%
Total	X1	E a marta	Count	446	1898	2344
		Female	% within X1	19.0%	81.0%	100.0%
	Tatal		Count	961	3041	4002
	IOTAI		% within X1	24.0%	76.0%	100.0%

Table 5.12: Influence of Gender and Marital status on EUY

According to Table 5.12, the percentage of female EUY is almost the same irrespective of marital status. However the percentage of married male EUY (18.1%) is significantly lower than the percentage of unmarried male EUY (71.2%).

VE - Education Attains	Y = Labour force					
AS = EQUCATION ATTAIN	Yes	No	Total			
		Mala	Count	259	694	953
	V1	Male	% within X1	27.2%	72.8%	100.0%
Passad G C E (O/L)	~1	Fomalo	Count	109	984	1093
Fassed G.C.E. (O/L)		remale	% within X1	10.0%	90.0%	100.0%
	Total		Count	368	1678	2046
	TOLAT		% within X1	18.0%	82.0%	100.0%
	X1	Male	Count	256	449	705
			% within X1	36.3%	63.7%	100.0%
Passed G C E (Λ/L)		Female	Count	337	914	1251
1 asseu G.C.L. (A/L)			% within X1	26.9%	73.1%	100.0%
	Total		Count	593	1363	1956
			% within X1	30.3%	69.7%	100.0%
		Male	Count	515	1143	1658
	V1	Male	% within X1	31.1%	68.9%	100.0%
Total	~1	Fomalo	Count	446	1898	2344
Total		remale	% within X1	19.0%	81.0%	100.0%
	Total		Count	961	3041	4002
	Total		% within X1	24.0%	76.0%	100.0%

Table 5.13: Influence of Gender and Education Attainment on EUY

As illustrated in Table 5.13, the percentage of EUY who passed G.C.E. (O/L) examination is comparatively higher than the EUY who passed G.C.E. (A/L) examination irrespective of the gender. The highest percentage of EUY (63.7%) was noted for the males having G.C.E. (A/L).

Table 5.14: Influence of Gender and English Literacy on EUY

	Y = Labo	our force	Total			
X6 = English Literacy			Yes	No		
	1		-			
		Male	Count	193	445	638
	X1	Maic	% within X1	30.3%	69.7%	100.0%
Ability to road and write		Fomolo	Count	228	771	999
Ability to read and write		remale	% within X1	22.8%	77.2%	100.0%
	Total		Count	421	1216	1637
	TOTAL		% within X1	25.7%	74.3%	100.0%
	X1	Male	Count	322	698	1020
			% within X1	31.6%	68.4%	100.0%
Unable to read and		Fomolo	Count	218	1127	1345
write		i emale	% within X1	16.2%	83.8%	100.0%
	Total		Count	540	1825	2365
			% within X1	22.8%	77.2%	100.0%
		Mole	Count	515	1143	1658
	VI	wale	% within X1	31.1%	68.9%	100.0%
Total	~1	Fomolo	Count	446	1898	2344
TOLAT		remale	% within X1	19.0%	81.0%	100.0%
	Total		Count	961	3041	4002
	TULAI		% within X1	24.0%	76.0%	100.0%

According to Table 5.14, the percentage of male EUY who are unable to read and write (68.4%) is almost the same that of males who are able to read and write (69.7%). Of the females, the percentage of EUY is higher among those who are unable to read and write (83.8%) than among those who are able to read and write (77.2%).

5.4 Summary of Chapter 5

In summary, it is proved that the best fitted logistic method of selection is invariant by the method of the identification of significant variables as results were same for all the forward and backward methods under LR and Wald criteria. Gender (X1), religion (X3), marital status (X4), education attainment (X5) and residential sector (X7) were found to be the most significant variables. In the two way interactions, Gender (X1) and Religion (X3), Gender (X1) and Marital status (X4), Gender (X1) and Education attainment (X5), Gender (X1) and English Literacy (X6) are found to be significant on the educated youth unemployment. The model with main effects only was improved by considering 2-way interaction terms and by the model with five main effects (gender (X1), religion (X3), marital status (X4), education attainment (X5) and residential sector (X7)) and four 2-way interaction terms were found significant based on Hosmer and Lemeshow Test (H-L statistic=6.704, p=0.460). The overall correct classification rate was 77.1%.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

This study has been carried out to identify the factors affecting the unemployment of the educated youth (EUY) with G.C.E. O/L and G.C.E. A/L qualifications in Sri Lanka. A corresponding sample of size 4002 was obtained from Labour Force Survey 2016 conducted by Department of Census and Statistics with a sample of 25,750. Based on the analysis carried out in Chapter 4 and Chapter 5, following conclusions and recommendations can be given.

6.1 Conclusions

- This analysis pointed out that females among the youth are more unemployed than males. In addition, among the unemployed youth, majority are Sinhalese and Buddhist. In terms of their marital status, majority of the unemployed youth are single.
- With respect to their educational qualifications, majority who are not in the labour force have obtained G.C.E. O/L qualification. In addition, most of these unemployed educated youth are in the estate sector.
- According to the analysis of 2-way frequency table, it shows that out of the selected seven variables gender, religion, literacy in English, education attainment and the sector do have significant influence while race and the marital status do not have significant influence with the educated youth unemployment in Sri Lanka.
- Binary logistic model with five variables (gender, religion, marital status, education attainment, sector residential) and four 2-way interaction terms (gender and Religion, gender and marital status, gender and education attainment, gender and English literacy) were found to be significant to explain the variation of EUY. The overall correct classification is 77.1%.

6.2 **Recommendations**

- The youth age group of (15-24) should be considered as a prime age group to be involved in the labour force irrespective of their gender.
- Among the youth population, as the proportion of educated females are more likely to be unemployed, it is necessary to create more chances for them in the job market as in some industries, gender discrimination takes place in hiring and recruitment process.
- According to the job market requirements, the secondary level and the tertiary level education system needs to be updated and the skills needs to be developed so that it would not be difficult for the females to find suitable jobs and contribute for the labour force.
- Further, in order to increase the women involvement in labour force, it's essential to initiate flexible working hours in companies either on shift basis or as part time work, so that it would be a support for the females in balancing their personal life and work life simultaneously.
- With the use of technological advancements, it is high time to create job opportunities for women to work from home which will increase the involvement of females in the labour force as in developed countries.
- In addition, the government can promote the concept of 'Entrepreneurship' as it would be more useful for both males and females to balance their life while earning a reasonable income and creating more employment opportunities for others as well.

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APPENDICES

APPENDIX A: SPSS Output of Logistic Regression using the selected explanatory variables

Table 7.11 Base 1 Percessing Paintary					
Unweighted Cases	N	Percent			
	Included in Analysis	4002	100.0		
Selected Cases	Missing Cases	0	.0		
	Total	4002	100.0		
Unselected Cases	5	0	.0		
Total		4002	100.0		

Table	A1: Case	e Processino	Summarv

Table A2: Dependent Variable Encoding

Original Value	Internal Value
Yes	0
No	1

-		Frequency	Pa	rameter codi	coding	
			(1)	(2)	(3)	
	Sinhala	2814	1.000	.000	.000	
Y2	Tamil	738	.000	1.000	.000	
~2	Malay	439	.000	.000	1.000	
	Other	11	.000	.000	.000	
	Buddhist	2649	1.000	.000	.000	
X3	Hindu	568	.000	1.000	.000	
	Muslim	434	.000	.000	1.000	
	Other	351	.000	.000	.000	
	Urban	801	1.000	.000		
X7	Rural	3110	.000	1.000		
	Estate	91	.000	.000		
	Single	3520	1.000	.000		
X4	Married	475	.000	1.000		
	Other	7	.000	.000		
VE	Passed G.C.E. (O/L)	2046	1.000			
X5	Passed G.C.E. (A/L)	1956	.000			
VC	Ability to read and write	1637	1.000			
70	Unable to read and write	2365	.000			
VA	Male	1658	1.000			
X1	Female	2344	.000			

Table A3: Categorical Variables Codings

Block 0: Beginning Block

			Predicted			
Observed			<u>۱</u>	(Percentage	
			Yes	No	Correct	
-	-	Yes	0	961	.0	
Step 0	Y	No	0	3041	100.0	
	Over	all Percentage			76.0	

Table A4: Classification Table^{a,b}

a. Constant is included in the model.

b. The cut value is .500

Table A	45: V	ariables	s in the	Equation
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Table A5: Variables in the Equation							
		В	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	1.152	.037	969.043	1	.000	3.164

			Score	df	Sig.
	-	Gender(1)	77.075	1	.000
		Race	7.331	3	.062
		Race(1)	7.264	1	.007
		Race(2)	4.098	1	.043
		Race(3)	1.828	1	.176
		Religion	26.468	3	.000
		Religion(1)	1.018	1	.313
		Religion(2)	11.082	1	.001
Stop 0	Variables	Religion(3)	2.114	1	.146
Step 0		Marital_Status	1.636	2	.441
		Marital_Status(1)	1.108	1	.293
		Marital_Status(2)	1.293	1	.255
		Education_Attainment(1)	83.327	1	.000
		English_Literacy(1)	4.412	1	.036
	Residential_Sector	17.079	2	.000	
	Residential_Sector(1)	17.058	1	.000	
		Residential_Sector(2)	14.486	1	.000
	Overall Statistics		229.415	13	.000

Table A6: Variables not in the Equation

Block 1: Method = Forward Stepwise (Likelihood Ratio)

Table A7: Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
	Step	83.835	1	.000
Step 1	Block	83.835	1	.000
	Model	83.835	1	.000
	Step	98.058	1	.000
Step 2	Block	181.893	2	.000
	Model	181.893	2	.000
	Step	20.497	3	.000
Step 3	Block	202.391	5	.000
	Model	202.391	5	.000
	Step	14.156	2	.001
Step 4	Block	216.547	7	.000
	Model	216.547	7	.000
	Step	14.430	2	.001
Step 5	Block	230.977	9	.000
	Model	230.977	9	.000

Table A7: Omnibus Tests of Model Coefficients

Table A8: Model Summary

Step	-2 Log likelihood	Cox & Snell R	Nagelkerke R
		Square	Square
1	4328.207 ^a	.021	.031
2	4230.149 ^a	.044	.067
3	4209.651 ^a	.049	.074
4	4195.495 ^a	.053	.079
5	4181.065 ^b	.056	.084

a. Estimation terminated at iteration number 4 because

parameter estimates changed by less than .001.

b. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table A9: H	osmer and L	Lemeshow	Test
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Step	Chi-square	df	Sig.			
1	.000	0				
2	23.802	2	.000			
3	22.069	6	.001			
4	24.573	7	.001			
5	27.309	8	.001			

		Y = 1	Yes	Y = No		Total
		Observed	Expected	Observed	Expected	
Stop 1	1	593	593.000	1363	1363.000	1956
Step 1	2	368	368.000	1678	1678.000	2046
	1	256	287.395	449	417.605	705
Sten 2	2	337	305.605	914	945.395	1251
Step 2	3	259	227.605	694	725.395	953
	4	109	140.395	984	952.605	1093
	1	203	234.938	355	323.062	558
	2	132	115.927	210	226.073	342
3	3	238	208.386	612	641.614	850
Stop 3	4	160	151.360	465	473.640	625
Step 5	5	85	85.679	320	319.321	405
	6	41	40.672	175	175.328	216
	7	77	89.491	608	595.509	685
	8	25	34.548	296	286.452	321
	1	218	252.688	385	350.312	603
2	2	152	135.014	266	282.986	418
	3	82	76.625	202	207.375	284
	4	188	164.018	515	538.982	703
Step 4	5	136	124.158	397	408.842	533
	6	79	76.139	321	323.861	400
	7	25	34.087	192	182.913	217
	8	63	74.065	532	520.935	595
	9	18	24.207	231	224.793	249
	1	101	104.739	120	116.261	221
	2	130	155.201	267	241.799	397
	3	136	120.332	227	242.668	363
	4	126	112.644	269	282.356	395
	5	127	131.608	448	443.392	575
Step 5	6	172	143.769	481	509.231	653
	7	69	73.399	338	333.601	407
	8	31	47.553	286	269.447	317
	9	54	53.479	414	414.521	468
	10	15	18.277	191	187.723	206

Table A10: Contingency Table for Hosmer and Lemeshow Test

				Predicte	d
	Observed		١	(Percentage
			Yes	No	Correct
	V	Yes	0	961	.0
Step 1	I	No	0	3041	100.0
•	Overall Pe	ercentage			76.0
Step 2	Y	Yes No	0 0	961 3041	.0 100.0
Overall Percentage				76.0	
Step 3	Y	Yes No	29 40	932 3001	3.0 98.7
	Overall Pe	ercentage			75.7
Step 4	Y	Yes No	9 9	952 3032	.9 99.7
	Overall Pe	ercentage			76.0
	V	Yes	21	940	2.2
Step 5	'	No	14	3027	99.5
	Overall Pe	ercentage			76.2

Table A11: Classification Table^a

a. The cut value is .500

Table A12: Model if Term Removed

Variable		Model Log	Change in -2	df	Sig. of the
		Likelihood	Log Likelihood		Change
Step 1	Education_Attainment	-2206.021	83.835	1	.000
Stop 2	Gender	-2164.103	98.058	1	.000
Step 2	Education_Attainment	-2167.918	105.686	1	.000
	Gender	-2153.403	97.154	1	.000
Step 3	Religion	-2115.074	20.497	3	.000
	Education_Attainment	-2155.150	100.649	1	.000
	Gender	-2146.660	97.825	1	.000
Stop 4	Religion	-2107.937	20.379	3	.000
Step 4	Education_Attainment	-2146.525	97.556	1	.000
	Residential_Sector	-2104.826	14.156	2	.001
	Gender	-2145.122	109.178	1	.000
	Religion	-2100.867	20.669	3	.000
Step 5	Marital_Status	-2097.748	14.430	2	.001
	Education_Attainment	-2141.446	101.827	1	.000
	Residential_Sector	-2098.051	15.036	2	.001

Table A13: Case Processing Summary

Unweighted Cases	N	Percent	
	Included in Analysis	4002	100.0
Selected Cases	Missing Cases	0	.0
	Total	4002	100.0
Unselected Cases		0	.0
Total		4002	100.0

Table A14: Dependent Variable Encoding

Original Value	Internal Value
Yes	0
No	1

		Frequency	Parameter coding		ng
			(1)	(2)	(3)
	Sinhala	2814	1.000	.000	.000
	Tamil	738	.000	1.000	.000
X2	Malay	439	.000	.000	1.000
	Other	11	.000	.000	.000
	Buddhist	2649	1.000	.000	.000
VO	Hindu	568	.000	1.000	.000
X3	Muslim	434	.000	.000	1.000
	Other	351	.000	.000	.000
	Urban	801	1.000	.000	
Х7	Rural	3110	.000	1.000	
	Estate	91	.000	.000	
	Single	3520	1.000	.000	
X4	Married	475	.000	1.000	
	Other	7	.000	.000	
VE	Passed G.C.E. (O/L)	2046	1.000		
A0	Passed G.C.E. (A/L)	1956	.000		
Ve	Ability to read and write	1637	1.000		
70	Unable to read and write	2365	.000		
V1	Male	1658	1.000		
A1	Female	2344	.000		

Table A15: Categorical Variables Codings

Table A16: Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	Ν	Percent	N	Percent
Labour_Force * Predicted group	4002	100.0%	0	0.0%	4002	100.0%

		Predicte	Total		
			Yes	No	
Labour_Force	Vaa	Count	21	940	961
	Yes	% within Labour_Force	2.2%	97.8%	100.0%
	No	Count	14	3027	3041
		% within Labour_Force	0.5%	99.5%	100.0%
Total		Count	35	3967	4002
TULAI		% within Labour_Force	0.9%	99.1%	100.0%

Table A17: Labour_Force * Predicted group Crosstabulation

Table A18: Chi-Square Tests

	Value	df	Asymp. Sig. (2-	Exact Sig. (2-	Exact Sig. (1-
		-	sided)	sided)	sided)
Pearson Chi-Square	25.060 ^a	1	.000		
Continuity Correction ^b	23.110	1	.000		
Likelihood Ratio	20.714	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	25.054	1	.000		
N of Valid Cases	4002				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.40.

b. Computed only for a 2x2 table

Appendix B: SPSS Output of Logistic Regression of the selected explanatory variables with the use of interaction terms

Block 0: Beginning Block

			Predicted			
Observed		١	(Percentage		
		Yes	No	Correct		
	-	Yes	0	961	.0	
Step 0	Y	No	0	3041	100.0	
	Ove	rall Percentage			76.0	

Table B1: Classification Table^{a,b}

a. Constant is included in the model.

b. The cut value is .500

Table B2: Variables in the Equation

		В	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	1.152	.037	969.043	1	.000	3.164

	Table B	3: Varia	bles not	in the	Equation
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			Score	df	Sig.
		Gender(1)	77.075	1	.000
		Race	7.331	3	.062
		Race(1)	7.264	1	.007
		Race(2)	4.098	1	.043
		Race(3)	1.828	1	.176
		Religion	26.468	3	.000
		Religion(1)	1.018	1	.313
		Religion(2)	11.082	1	.001
Step 0	Variables	Religion(3)	2.114	1	.146
		Marital_Status	1.636	2	.441
		Marital_Status(1)	1.108	1	.293
		Marital_Status(2)	1.293	1	.255
		Education_Attainment(1)	83.327	1	.000
		English_Literacy(1)	4.412	1	.036
		Residential_Sector	17.079	2	.000
		Residential_Sector(1)	17.058	1	.000
		Residential_Sector(2)	14.486	1	.000

Gender * Race	79.761	3	.000
Gender(1) by Race(1)	35.008	1	.000
Gender(1) by Race(2)	13.398	1	.000
Gender(1) by Race(3)	11.053	1	.001
Gender * Religion	58.004	3	.000
Gender(1) by Religion(1)	30.143	1	.000
Gender(1) by Religion(2)	4.762	1	.029
Gender(1) by Religion(3)	10.897	1	.001
Gender * Marital_Status	184.131	2	.000
Gender(1) by	32.543	1	.000
Marital_Status(1)			
Gender(1) by	134.853	1	.000
Marital_Status(2)			
Education_Attainment(1) by	6.864	1	.009
Gender(1)			
English_Literacy(1) by	16.185	1	.000
Gender(1)			
Gender * Residential_Sector	74.581	2	.000
Gender(1) by	21.866	1	.000
Residential_Sector(1)			
Gender(1) by	37.598	1	.000
Residential_Sector(2)			
Overall Statistics	354.506	25	.000

Block 1: Method = Forward Stepwise (Likelihood Ratio)

		Chi-square	df	Sig.
	Step	160.107	2	.000
Step 1	Block	160.107	2	.000
	Model	160.107	2	.000
	Step	114.788	1	.000
Step 2	Block	274.895	3	.000
	Model	274.895	3	.000
	Step	19.306	1	.000
Step 3	Block	294.200	4	.000
	Model	294.200	4	.000
	Step	20.243	3	.000
Step 4	Block	314.443	7	.000
	Model	314.443	7	.000

Table B4: Omnibus Tests of Model Coefficients

	Step	16.607	3	.001
Step 5	Block	331.050	10	.000
	Model	331.050	10	.000
	Step	13.507	2	.001
Step 6	Block	344.558	12	.000
	Model	344.558	12	.000
Step 7	Step	3.952	1	.047
	Block	348.510	13	.000
	Model	348.510	13	.000

.

Table B5: Model Summary

Step	-2 Log likelihood	Cox & Snell R	Nagelkerke R
		Square	Square
1	4251.936 ^a	.039	.059
2	4137.147 ^a	.066	.099
3	4117.842 ^b	.071	.106
4	4097.599 ^b	.076	.113
5	4080.992 ^b	.079	.119
6	4067.485 ^b	.082	.124
7	4063.532 ^b	.083	.125

Table B6: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	.000	1	1.000
2	17.645	3	.001
3	.039	3	.998
4	6.793	7	.451
5	6.166	7	.520
6	6.775	7	.453
7	6.704	7	.460

Table B7	7: Classific	ation Table ^a
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			Predicted			
Observe	d)	Percentage		
			Yes No Correct			
	- -	Yes	59	902	6.1	
Step 1	Ŷ	No	13	3028	99.6	
	Overall Percentage				77.1	
Step 2	Y	Yes	59	902	6.1	
		No	13	3028	99.6	
	Overall Percentage				77.1	

		1	1		
	V	Yes	59	902	6.1
Step 3	ř	No	13	3028	99.6
	Overall	Percentage			77.1
	X	Yes	59	902	6.1
Step 4	Ŷ	No	13	3028	99.6
	Overall	Percentage			77.1
		Yes	59	902	6.1
Step 5	Y	No	13	3028	99.6
	Overall	Percentage			77.1
	Y	Yes	59	902	6.1
Step 6		No	13	3028	99.6
	Overall Percentage				77.1
		Yes	59	902	6.1
Step 7	Y	No	13	3028	99.6
	Overall	Percentage			77.1

a. The cut value is .500

		Y = Yes		Y = No		Total
		Observed	Expected	Observed	Expected	
	1	59	59.000	13	13.000	72
Step 1	2	456	456.000	1129	1129.000	1585
	3	446	446.000	1899	1899.000	2345
	1	59	59.000	13	13.000	72
	2	237	262.107	443	417.893	680
Step 2	3	337	309.474	915	942.526	1252
	4	219	193.893	686	711.107	905
	5	109	136.526	984	956.474	1093
	1	59	59.000	13	13.000	72
	2	237	235.235	443	444.765	680
Step 3	3	337	337.000	915	915.000	1252
	4	219	220.765	686	684.235	905
	5	109	109.000	984	984.000	1093
	1	141	130.742	116	126.258	257
	2	163	165.857	314	311.143	477
	3	67	64.490	143	145.510	210
	4	238	230.081	612	619.919	850
Step 4	5	132	147.099	461	445.901	593
	6	79	89.234	318	307.766	397
	7	39	37.177	173	174.823	212
	8	77	69.914	608	615.086	685
	9	25	26.405	296	294.595	321

Table B8: Contingency Table for Hosmer and Lemeshow Test

	1					
	1	188	181.815	208	214.185	396
	2	163	159.852	314	317.148	477
	3	20	20.472	51	50.528	71
	4	238	240.342	612	609.658	850
Step 5	5	67	61.640	174	179.360	241
	6	132	138.699	461	454.301	593
	7	51	63.702	317	304.298	368
	8	77	74.658	608	610.342	685
	9	25	19.820	296	301.180	321
	1	194	185.402	196	204.598	390
	2	202	197.137	396	400.863	598
	3	52	63.723	158	146.277	210
	4	188	189.661	515	513.339	703
Step 6	5	149	146.763	488	490.237	637
	6	70	75.659	333	327.341	403
	7	18	21.003	127	123.997	145
	8	63	62.134	532	532.866	595
	9	25	19.518	296	301.482	321
	1	197	188.490	202	210.510	399
	2	140	140.828	264	263.172	404
	3	107	113.970	274	267.030	381
	4	188	188.852	515	514.148	703
Step 7	5	121	119.638	376	377.362	497
	6	85	81.195	307	310.805	392
	7	35	46.659	275	263.341	310
	8	63	61.874	532	533.126	595
	9	25	19.492	296	301.508	321

Table B9: Variables in the Equation

		В	S.E.	Wald	df	Sig.	Exp(B)
	Gender * Marital_Status			127.003	2	.000	
	Gender(1) by	542	.076	50.269	1	.000	.581
Stop 1 ^a	Marital_Status(1)						
Step 1	Gender(1) by	-2.961	.311	90.744	1	.000	.052
	Marital_Status(2)						
	Constant	1.449	.053	758.075	1	.000	4.258
	Education_Attainment(1)	.833	.079	110.388	1	.000	2.300
Step 2 ^b	Gender * Marital_Status			153.170	2	.000	
	Gender(1) by	647	.079	67.960	1	.000	.523
	Marital_Status(1)						

	Gender(1) by	-3.230	.316	104.670	1	.000	.040
	Marital_Status(2)						
	Constant	1.114	.060	348.434	1	.000	3.046
	Education_Attainment(1)	1.201	.119	101.289	1	.000	3.325
	Gender * Marital_Status			79.257	2	.000	
	Gender(1) by	362	.102	12.502	1	.000	.696
	Marital_Status(1)						
Step 3 ^c	Gender(1) by	-2.858	.324	77.656	1	.000	.057
	Marital_Status(2)						
	Education_Attainment(1) by	707	.163	18.924	1	.000	.493
	Gender(1)						
	Constant	.999	.064	245.719	1	.000	2.715
	Religion			20.419	3	.000	
	Religion(1)	.406	.128	10.130	1	.001	1.501
	Religion(2)	.709	.164	18.789	1	.000	2.032
	Religion(3)	.558	.171	10.634	1	.001	1.748
	Education_Attainment(1)	1.183	.120	97.742	1	.000	3.265
	Gender * Marital_Status			79.366	2	.000	
Step 4 ^d	Gender(1) by	362	.103	12.428	1	.000	.696
	Marital_Status(1)						
	Gender(1) by	-2.866	.325	77.787	1	.000	.057
	Marital_Status(2)						
	Education_Attainment(1) by	703	.163	18.624	1	.000	.495
	Gender(1)						
	Constant	.585	.128	20.772	1	.000	1.795
	Religion			31.918	3	.000	
	Religion(1)	.494	.169	8.512	1	.004	1.638
	Religion(2)	1.140	.233	23.962	1	.000	3.126
	Religion(3)	1.078	.252	18.287	1	.000	2.938
	Education_Attainment(1)	1.170	.120	94.872	1	.000	3.223
	Gender * Religion			16.236	3	.001	
	Gender(1) by Religion(1)	211	.256	.676	1	.411	.810
	Gender(1) by Religion(2)	876	.331	6.990	1	.008	.416
Step 5 ^e	Gender(1) by Religion(3)	-1.014	.351	8.371	1	.004	.363
	Gender * Marital_Status			62.917	2	.000	
	Gender(1) by	035	.247	.020	1	.887	.965
	Marital_Status(1)						
	Gender(1) by	-2.522	.395	40.789	1	.000	.080
	Marital Status(2)						
	Education_Attainment(1) bv	669	.164	16.733	1	.000	.512
	Gender(1)						
	· · /						
	Constant	.437	.160	7.447	1	.006	1.549

	Religion(1)	.418	.171	5.974	1	.015	1.520
	Religion(2)	1.111	.234	22.519	1	.000	3.038
	Religion(3)	1.111	.253	19.257	1	.000	3.039
	Education_Attainment(1)	1.153	.120	91.790	1	.000	3.169
	Residential_Sector			13.786	2	.001	
	Residential_Sector(1)	150	.288	.272	1	.602	.860
	Residential_Sector(2)	.201	.281	.512	1	.474	1.223
	Gender * Religion			16.754	3	.001	
	Gender(1) by Religion(1)	199	.257	.603	1	.437	.819
	Gender(1) by Religion(2)	872	.332	6.871	1	.009	.418
	Gender(1) by Religion(3)	-1.033	.352	8.624	1	.003	.356
	Gender * Marital_Status			62.886	2	.000	
	Gender(1) by	052	.248	.043	1	.835	.950
	Marital_Status(1)						
	Gender(1) by	-2.540	.396	41.080	1	.000	.079
	Marital_Status(2)						
	Education_Attainment(1) by	655	.164	15.991	1	.000	.519
	Gender(1)	070	0.4.0			005	4 450
		.376	.310	1.474	1	.225	1.456
	Religion			33.712	3	.000	
	Religion(1)	.412	.171	5.777	1	.016	1.509
	Religion(2)	1.109	.234	22.426	1	.000	3.032
	Religion(3)	1.115	.253	19.349	1	.000	3.048
	Education_Attainment(1)	1.152	.120	91.562	1	.000	3.165
	Residential_Sector			15.831	2	.000	
	Residential_Sector(1)	158	.288	.300	1	.584	.854
	Residential_Sector(2)	.224	.281	.633	1	.426	1.251
	Gender * Religion			16.434	3	.001	
	Gender(1) by Religion(1)	206	.257	.642	1	.423	.814
Sten 7 ^g	Gender(1) by Religion(2)	853	.333	6.566	1	.010	.426
Otep /	Gender(1) by Religion(3)	-1.046	.352	8.814	1	.003	.351
	Gender * Marital_Status			62.352	2	.000	
	Gender(1) by	181	.257	.500	1	.480	.834
	Marital_Status(1)						
	Gender(1) by	-2.650	.401	43.641	1	.000	.071
	Marital Status(2)						
	Education Attainment(1) by	585	.168	12.130	1	.000	.557
	Gender(1)						
	English_Literacy(1) by	.239	.121	3.919	1	.048	1.270
	Gender(1)						
	Constant	.366	.310	1.396	1	.237	1.442

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Variable		Model Log	Change in -2	df	Sig. of the
Chan 1	Condex * Merital Status				Change
Step	Gender Marital_Status	-2200.021	100.107	2	.000
Step 2	Education_Attainment	-2125.900	114.700	1	.000
	Gender Marital_Status	-2104.103	191.000	2	.000
	Education_Attainment	-2115.900	113.971	1	.000
Step 3	Gender " Marital_Status	-2112.232	100.023	2	.000
	Education_Attainment	-2068.574	19.300	1	.000
	Peligion	-2058 921	20.243	3	000
	Education Attainment	-2000.921	109 651	1	.000
Step 4	Gender * Marital Status	-2102.071	106.544	2	.000
	Education Attainment *	-2058.297	18.995	1	.000
	Gender				
	Religion	-2057.281	33.569	3	.000
	Education_Attainment	-2093.535	106.078	1	.000
	Gender * Religion	-2048.799	16.607	3	.001
Step 5	Gender * Marital_Status	-2084.029	87.066	2	.000
	Education_Attainment *	-2049.017	17.042	1	.000
	Gender				
	Religion	-2051.712	35.939	3	.000
	Education_Attainment	-2084.934	102.383	1	.000
	Residential_Sector	-2040.496	13.507	2	.001
Step 6	Gender * Religion	-2042.317	17.150	3	.001
l	Gender * Marital_Status	-2077.201	86.917	2	.000
l	Education_Attainment *	-2041.880	16.276	1	.000
l	Gender				
l	Religion	-2049.880	36.229	3	.000
	Education_Attainment	-2082.819	102.106	1	.000
	Residential_Sector	-2039.520	15.507	2	.000
Oten 7	Gender * Religion	-2040.179	16.826	3	.001
Step /	Gender * Marital_Status	-2074.759	85.987	2	.000
l	Education_Attainment *	-2037.911	12.290	1	.000
	Gender				
	English Literacy * Gender	-2033.742	3.952	1	.047

Table B10: Model if Term Removed

			Score	df	Sig.
		Gender(1)	.235	1	.628
		Race	8.048	3	.045
		Race(1)	7.948	1	.005
		Race(2)	3.632	1	.057
		Race(3)	2.811	1	.094
	Religion	26.489	3	.000	
		Religion(1)	1.115	1	.291
		Religion(2)	10.098	1	.001
		Religion(3)	2.932	1	.087
		Marital_Status	2.769	2	.250
		Marital_Status(1)	2.754	1	.097
		Marital_Status(2)	2.639	1	.104
		Education_Attainment(1)	113.393	1	.000
		English_Literacy(1)	8.556	1	.003
		Residential_Sector		2	.000
		Residential_Sector(1)	16.944	1	.000
	Variables	Residential_Sector(2)	15.065	1	.000
Step 1	Valiables	Gender * Race	1.271	3	.736
		Gender(1) by Race(1)	.949	1	.330
		Gender(1) by Race(2)	.506	1	.477
		Gender(1) by Race(3)	.412	1	.521
		Gender * Religion	2.969	3	.396
		Gender(1) by Religion(1)	1.326	1	.249
		Gender(1) by Religion(2)	.083	1	.773
		Gender(1) by Religion(3)	.512	1	.474
		Education_Attainment(1) by Gender(1)	20.217	1	.000
		English_Literacy(1) by Gender(1)	.000	1	.989
		Gender * Residential_Sector	3.284	2	.194
		Gender(1) by	1.880	1	.170
		Residential_Sector(1)			
		Gender(1) by Residential_Sector(2)	2.845	1	.092
	Overall Stat	listics	192.372	23	.000
010		Gender(1)	.329	1	.567
Step 2	variables	Race	4.451	3	.217

Table B11: Variables not in the Equation

		Race(1)	4.330	1	.037
		Race(2)	2.286	1	.131
		Race(3)	1.169	1	.280
		Religion	20.961	3	.000
		Religion(1)	.297	1	.586
		Religion(2)	8.152	1	.004
		Religion(3)	1.216	1	.270
		Marital_Status	1.450	2	.484
		Marital_Status(1)	1.407	1	.236
		Marital_Status(2)	1.306	1	.253
		English_Literacy(1)	.008	1	.930
		Residential_Sector	13.838	2	.001
		Residential_Sector(1)	13.783	1	.000
		Residential_Sector(2)	12.696	1	.000
		Gender * Race	2.711	3	.438
		Gender(1) by Race(1)	2.228	1	.136
		Gender(1) by Race(2)	.647	1	.421
		Gender(1) by Race(3)	1.600	1	.206
		Gender * Religion	3.840	3	.279
		Gender(1) by Religion(1)	2.272	1	.132
		Gender(1) by Religion(2)	.035	1	.851
		Gender(1) by Religion(3)	1.805	1	.179
		Education_Attainment(1) by	19.054	1	.000
		Gender(1)			
		English_Literacy(1) by	5.252	1	.022
		Gender(1)			
		Gender * Residential_Sector	3.357	2	.187
		Gender(1) by	1.768	1	.184
		Residential_Sector(1)			
		Gender(1) by	2.791	1	.095
		Residential_Sector(2)			
	Overall Stat	tistics	83.570	22	.000
		Gender(1)	.369	1	.544
		Race	4.330	3	.228
		Race(1)	4.152	1	.042
		Race(2)	1.929	1	.165
		Race(3)	1.346	1	.246
Step 3	Variables	Religion	20.662	3	.000
		Religion(1)	.271	1	.603
		Religion(2)	7.656	1	.006
		Religion(3)	1.384	1	.239
		Marital_Status	1.067	2	.587
		Marital_Status(1)	1.008	1	.315

		Marital_Status(2)	.915	1	.339
		English_Literacy(1)	.002	1	.964
		Residential_Sector	12.852	2	.002
		Residential_Sector(1)	12.776	1	.000
		Residential_Sector(2)	11.908	1	.001
		Gender * Race	1.972	3	.578
		Gender(1) by Race(1)	1.640	1	.200
		Gender(1) by Race(2)	.580	1	.447
		Gender(1) by Race(3)	1.013	1	.314
		Gender * Religion	3.342	3	.342
		Gender(1) by Religion(1)	1.838	1	.175
		Gender(1) by Religion(2)	.053	1	.819
		Gender(1) by Religion(3)	1.172	1	.279
		English_Literacy(1) by	1.938	1	.164
		Gender(1)			
		Gender * Residential_Sector	3.336	2	.189
		Gender(1) by	1.800	1	.180
		Residential_Sector(1)			
		Gender(1) by	2.810	1	.094
		Residential_Sector(2)			
	Overall Stat	stics	65.297	21	.000
		Gender(1)	.559	1	.455
		Race	1.527	3	.676
		Race(1)	.605	1	.437
		Race(2)	.133	1	.715
		Race(3)	.026	1	.871
		Marital_Status	1.096	2	.578
		Marital_Status(1)	.995	1	.318
		Marital_Status(2)	.881	1	.348
		English_Literacy(1)	.129	1	.719
		Residential_Sector	13.289	2	.001
Step 4	Variables	Residential_Sector(1)	12.658	1	.000
	Vanabioo	Residential_Sector(2)	13.098	1	.000
		Gender * Race	12.950	3	.005
		Gender(1) by Race(1)	10.835	1	.001
		Gender(1) by Race(2)	4.380	1	.036
		Gender(1) by Race(3)	6.479	1	.011
		Gender * Religion	16.432	3	.001
		Gender(1) by Religion(1)	6.167	1	.013
		Gender(1) by Religion(2)	6.149	1	.013
		Gender(1) by Religion(3)	7.695	1	.006
		English_Literacy(1) by	2.241	1	.134
		Gender(1)			

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		Gender * Residential_Sector	4.813	2	.090
		Gender(1) by	1.627	1	.202
		Residential_Sector(1)			
		Gender(1) by	3.162	1	.075
		Residential_Sector(2)			
	Overall Stat	istics	44.644	18	.000
		Gender(1)	.650	1	.420
		Race	1.275	3	.735
		Race(1)	.463	1	.496
	Race(2)	.111	1	.739	
		Race(3)	.001	1	.979
		Marital_Status	.979	2	.613
		Marital_Status(1)	.892	1	.345
		Marital_Status(2)	.792	1	.373
		English_Literacy(1)	.199	1	.656
		Residential_Sector	13.858	2	.001
	Variables	Residential_Sector(1)	13.363	1	.000
Stop 5		Residential_Sector(2)	13.553	1	.000
Step 5		Gender * Race	1.579	3	.664
		Gender(1) by Race(1)	.673	1	.412
		Gender(1) by Race(2)	1.426	1	.232
		Gender(1) by Race(3)	.226	1	.635
		English_Literacy(1) by	1.943	1	.163
		Gender(1)			
		Gender * Residential_Sector	2.749	2	.253
		Gender(1) by	1.054	1	.305
		Residential_Sector(1)			
		Gender(1) by	1.951	1	.163
		Residential_Sector(2)			
	Overall Stat	istics	28.394	15	.019
		Gender(1)	.565	1	.452
		Race	1.420	3	.701
		Race(1)	.443	1	.506
		Race(2)	.085	1	.771
		Race(3)	.000	1	.998
		Marital_Status	.730	2	.694
Step 6	Variables	Marital_Status(1)	.642	1	.423
		Marital_Status(2)	.561	1	.454
		English_Literacy(1)	1.775	1	.183
		Gender * Race	1.750	3	.626
		Gender(1) by Race(1)	.700	1	.403
		Gender(1) by Race(2)	1.558	1	.212
		Gender(1) by Race(3)	.223	1	.637

		English_Literacy(1) by	3.926	1	.048
		Gender(1)			
		Gender * Residential_Sector	5.395	2	.067
		Gender(1) by	4.308	1	.038
		Residential_Sector(1)			
		Gender(1) by		1	.109
		Residential_Sector(2)			
	Overall Stat	istics	14.142	13	.364
		Gender(1)	.558	1	.455
		Race	1.329	3	.722
		Race(1)	.521	1	.470
		Race(2)	.143	1	.705
	Variables	Race(3)	.000	1	.991
		Marital_Status	.711	2	.701
		Marital_Status(1)	.622	1	.430
		Marital_Status(2)	.543	1	.461
		English_Literacy(1)	.001	1	.981
Step 7	Vallabies	Gender * Race	1.432	3	.698
		Gender(1) by Race(1)	.571	1	.450
		Gender(1) by Race(2)	1.268	1	.260
		Gender(1) by Race(3)	.234	1	.628
		Gender * Residential_Sector	4.419	2	.110
		Gender(1) by	3.181	1	.074
		Residential_Sector(1)			
		Gender(1) by	1.678	1	.195
		Residential_Sector(2)			
	Overall Stat	istics	10.229	12	.596

Crosstabs

Table	B12:	Case	Processing	Summarv
IUNIO		0400	riccocoing	Carrinary

		Cases						
	Va	alid	Mis	sing	Total			
	N	Percent	N	Percent	N	Percent		
Labour_Force * Predicted	4002	100.0%	0	0.0%	4002	100.0%		
group								

			Predicted group		Total
			Yes	No	
Labour_Force	Yes	Count	59	902	961
		% within Labour_Force	6.1%	93.9%	100.0%
	No	Count	13	3028	3041
		% within Labour_Force	0.4%	99.6%	100.0%
Total		Count	72	3930	4002
TULAI		% within Labour_Force	1.8%	98.2%	100.0%

Table B13: Labour_Force * Predicted group Crosstabulation

Table B14: Chi-Square Tests

	Value	df	Asymp. Sig. (2-	Exact Sig. (2-	Exact Sig. (1-
			sided)	sided)	sided)
Pearson Chi-Square	134.853 ^a	1	.000		
Continuity Correction ^b	131.639	1	.000		
Likelihood Ratio	109.925	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	134.819	1	.000		
N of Valid Cases	4002				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 17.29.

b. Computed only for a 2x2 table