Austerity and Precarious Work:
An Examination of Nova Scotia's Service Sector Post-2008

By

Aundréa Mitchell

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Abstract

The 2008 global financial crisis caused many changes to countries around the globe that have become linked through globalization. Austerity arose as a method to fix what was seen as a broken system. With it came a restructuring of the economy, its institutions, and its workers. While literature examining the crisis discusses broad changes both nationally and globally, different economies and the workers within them were affected differently. A study of Canada as a whole will miss the differences which are present across the nation's diverse economic regions. An understanding of how the changes to Nova Scotia's labour market following the events of 2008 have affected the composition of the province's service sector is missing. It is this gap in the literature which this research will contribute to filling through the use of quantitative analysis. Statistical regression was conducted using Statistics Canada's Labour Force Survey since 2008. Findings will then be contextualized through the lens of the sociology of work, via austerity and precarious work.

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Introduction

Articles published with titles such as: "Economic Crisis Slams Canada" (Annis, 2009), and "The End of the Financial World as we Know it" (Lewis & Einhorn, 2009) signal a crucial point in time which brought with it a great deal of change – the 2008 financial crisis. The economic and personal effects of the crisis are still being felt and written about in the news, with more recent articles such as "Canada's Recovery Remains Mixed" (Grant, 2013), and "The Legacy of the Financial Crisis" (The Canadian Council for Public-Private Partnerships, 2014). It has also been noted that the 2008 financial shock brought to the fore the hidden realities of globalization (Standing, 2011, p. vii), and the growing class of precarious workers, not just in Canada but globally as well (Standing, 2011, p. vii). It is important to understand the effects of the 2008 financial crisis, and the societal changes which resulted; to learn and inform future responses, in order to not repeat the same mistakes.

While studies have examined and explained the effects of the 2008 financial crisis more broadly, there has not been any academic research published which specifically addresses Nova Scotia's economy. Due to the difference in how different locations and section of the population are affected by austerity, an understanding of Nova Scotia will aid in grasping the changes to its unique people and economy. Therefore, the goal of this research is to gain a better understanding of the effects of the 2008 financial crisis on Nova Scotia, with an examination of the service sector labour force rather than all sectors due to time constraints. This goal will be expressed through the question: how have the changes to Nova Scotia's labour market following the 2008 financial crisis affected the composition of the province's service sector labour force? Work arrangement, deskilling, and underemployment are the broader areas which have been operationalized into research variables to examine formations of precarious work under austerity

over time. The variables from the Statistics Canada *Labour Force Survey* that will be used in the analysis are: number of jobs, full or part-time employment, job permanence, flows of unemployment, occupational skill level, and wages. These variables will be quantitatively examined not only individually, but also as a bivariate analysis via tables, graphs and simple regression, as well as through multivariate regression. The results will be analyzed through the lenses of the literature on the sociology of work, austerity, and precarious work. This analysis will be done not only to add to the growing body of literature on the sociology of work, but also to gain a better understanding of the patterns and trends depicted in the results, and their meaning for our society and workers in Nova Scotia's service sector.

Theoretical Framework

Sociology of Work

Work is an activity we all expect to take part in at some point in our lives. As children, we looked at the adults working around us and thought of what we wanted to be when we grew up, whether it was a firefighter, a garbageman, or an astronaut. However, the reality of work when we get older and begin to engage in the labour market is a bit more complex and nuanced. For some, jobs start while still in school, while others have the freedom to wait to take part; some people have the opportunity to go to trade school, college or university to prepare for careers; indeed, some others still struggle with finding any employment. Much of our lives revolve around and are occupied by work. Whether as a result of or preceding this, work has become a symbol of personal value in our society. That being said, we do not all experience work in the same ways (Grint, 2005, p. 1). For some it is a positive symbol which affords us status, mobility, finances, resources dignity and a means to realize self potential (Grint, 2005, p. 1; Sennett &

Cobb, 1972, pp. 28, 31). For others it is an embodiment of the opposite; back-breaking, incapacitating, degrading, it is seen as a punishment or something to avoid, something despised but required to survive (Grint, 2005, p. 1; Marx, 1959, p. 31). In his work, Grint (2005) quotes *War Factory* (Mass Observation, 1943), where a female munitions worker during World War II articulates that work is "the blank patch between one brief evening and the next" (p. 1). In our society, work takes up so much of our time that life can sometimes seem secondary, because life is defined separately from work. For some this is a sign of a good life, and for others this is not the case. Indeed, one prevalent theory is that labour alienates us from our selves, from that which makes us human (Marx, 1959, p. 31). It is these differences in perception, organization and the realities of work that are of interest in the sociology of work.

Scholars in the sociology of work not only study the patterns and configuration of work over time, but also the human element, the link between work and people. In their seminal text *The Hidden Injuries of Class*, Sennett and Cobb (1972) discuss issues such as self-worth and dignity within the sphere of work, linking what people feel about or toward their work with pattern and organizational structures of labour. Education, and the work accessed afterward play a significant role in this idea of dignity. If someone has achieved a higher level of formal education, beyond the base requirements, but cannot find work which allows the utilization of skills, it can lead to feelings of self-blame and decreased self-worth (Sennett & Cobb, 1972, p. 28). In addition, the concept of class within employment is "a system for limiting freedom" which is present at all class levels, but manifests differently at each (Sennett & Cobb, 1972, p. 28). In a system that imposes severe limits on individual freedom, there is a struggle to attain a level of freedom that will afford dignity (Sennett & Cobb, 1972, p. 29). It follows then, that those who unable to use their education due to underemployment face this sense of indignity.

Furthermore, deskilling of labour allows less individual choice, freedom, and power within work adding these feelings of indignity. Hoggart (1957) speaks to ideas continuing from these concerns on the part of Sennett and Cobb (p.1). Ideas which remain today regarding doubts in the quality of the levels of the working class and its deterioration, and a system which limits freedom (Sennett & Cobb, 1972, p. 28). This limitation of freedoms also is at play in the alienation of labour, wherein lies the premise that workers only feel like themselves outside of work. Also, that labour is not entered into voluntarily, but that we are forced into labour as the only way to obtain what we need to live (Marx, 1959, p. 30). This concept also contends that labour acts to fulfill needs created outside of the body and self. Labour as employment and work was created not by the natural world we live in, but by the social world, and therefore does not serve to satisfy our species-being (Marx, 1959, p. 30). A link from Marx's and Hoggart's work can be drawn to austerity today. Marx's theory of alienation of labour has relevance today in a discussion of changes to labour through austerity which serve to dehumanize, alienate, and estrange individuals from themselves and their labour (Marx, 1959, p. 30). He argues that the success of some of the more harmful discourses and actions upon working class life are able to take hold and flourish because they appeal to attitudes already in place, whether good or bad (Hoggart, 1957, p. 1). Austerity is one such discourse, which was able to take hold and flourish because it was appealing as a solution to the financial crisis.

Austerity

Austerity discourse has arisen more fervently in Canada since the 2008 financial crisis (Evans & Albo, 2011; Cunningham et al, 2016, p. 457; Tufts & Thomas, 2014, p. 67). This discourse is one which deflates the economy, through the reduction of wages, prices, and public spending as a solution to fix the state's budget and debt (Blyth, 2013, p. 2). In essence, austerity

means doing more for less money (Sears, 1999, p. 102; Grenier & Jalette, 2016, p. 461). It has

pushed forward with great speed due to the crisis narrative which legitimizes the austerity action

through its assertion that great measures must be taken immediately (Grenier & Jalette, 2016, pp.

65, 69; Evans & Albo, 2011; Ross & Savage, 2014, p. 6; Sears, 1999, pp. 94-5), no matter the

cost, even when the cost includes cuts to social programs, and a move toward privatization

(Hanson, 2013, p. 104; Ross & Savage, 2014, pp. 5-6; Tufts & Thomas, 2014, pp. 62-3; Sears,

1999, p. 92; Cunningham et al., 2016, pp. 456-7; Evans & Albo, 2011). The 2008 financial crisis

was not as severe in Canada as elsewhere, but there was enough that the government enacted an

austerity response (Evans & Albo, 2011, p. 10). From 2007 to 2009, Canada's economic growth

rate fell from 3% to -2.6%. National unemployment went from 6% to 8.3% in the same period

(Evans & Albo, 2011, p. 11). Further, Canada went from a national budget surplus of ten billion

dollars, to a deficit of fifty-four billion (Evans & Albo, 2011, p. 11). These outcomes after 2008

led to state run 'rescue strategies', and in 2009 the austerity programs began as one such strategy

advocated for by the Organization for Economic Co-operation, the World Bank, and the

International Monetary Fund, which are international organizations with significant influence

(Evans & Albo, 2011, p. 13). However, these measures meant to help boost the economy have

not necessarily helped the working class, as seen in the Nova Scotia unemployment rate which

still sits at 8.4% as of 2017 (Statitics Canada, 2018).

Some of the negative effects resulting from austerity are the result of privatization.

Privatization is the removal of public funding and resources, with a greater share of services

being owned and operated by private organizations (Tufts & Thomas, 2014, pp. 62-3). This

aspect of rolling back public funding and services as a method for the government to recover

national finances has resulted in numerous changes to the composition of the workforce. Not

only does privatization include outsourcing but has also led to a reduction of public supports and services, downsizing, and the hiring of part-time and temporary labour in a continued effort to reduce cost by rolling back benefits (Cunningham et al., 2016, p. 457; Ross & Savage, 2014, p. 5; Tufts & Thomas, 2014, pp. 62-3; Sears, 1999, pp. 97-8; Vosko et al., 2003, p. 1). These transformations aimed at helping the national economy have not benefited all workers who take part in said economy. The modifications to the composition of the labour force and new labour practices are often detrimental to workers. These include a decrease in compensation, increased workloads, unjust or unsafe conditions, greater insecurity, and more people with multiple jobs (Cunningham et al, 2016, p. 459; Sears, 1999, p. 100; Savage & Ross, 2013, p. 9; Tufts & Thomas, 2014, p. 61; Grenier & Jalette, 2016, p. 70; Evans & Albo, 2011, p. 13).

Further, there is a crisis of unemployment and underemployment due to fewer positions being available overall, but even fewer still at higher levels due to downsizing and a constricting of the labour market (Ross & Savage, 2014, p. 6; Cunningham et al, 2016, pp. 461, 465; Evans & Albo, 2011, p. 13; Tufts & Thomas, 2014, p. 62). In addition to the rise of unemployment levels resulting from austerity, there has been a rolling back of social programs, including unemployment benefits and welfare (Ross & Savage, 2014, p. 6). The government's austerity measures are increasing unemployment rates while decreasing supports for those who are unemployed (Ross & Savage, 2014, p. 6). In the past, the labour force could protest these realities through the exercising of their union power. While the erosion of unions did not begin with this round of austerity measures following 2008, unions and union power have been weakened further in recent years, making resistance increasingly more difficult (Ross & Savage, 2013, p. 6; Ross & Savage, 2014, p. 9; Tufts & Thomas, 2014, p. 63; Sears, 1999, p. 100; Grenier & Jalette, 2016, p. 459).

The overarching theme presented by the government in their austerity discourse is doing more for less, doing better for less (Sears, 1999, p. 102; Grenier & Jalette, 2016, p. 461). However, the consensus in academic literature is that the government is not doing more or doing better. It is failing to provide even basic services adequately in the wake of the havoc wreaked on the economy and labour market. This leaves many workers in worse positions than before, giving them no support because "social programs are seen as obstacles" to developing a lean state (Sears, 1999, p. 92). The impact of this 'rescue strategy' has been to reinforce the already huge disparity in the income and wealth of the population, deepening inequalities (Ross & Savage, 2014, p. 6). What is lacking in this response to the 2008 financial crisis is a balance between the interests of the government and the interests of the people they are supposed to serve (Levine, 1970, pp. 15-16). Instead, we have ended up with a labour force reorganized into "austerity compelled precarity" (Cunningham et al, 2016, pp. 455-6).

Precarious Work

Sears (1999) describes the goals of austerity as producing a flexible workforce, expressed in terms of hours worked, workload, and willingness to work in varied situations. This is paired with limited expectations for benefits, compensation, security, and working conditions (p.99). Therefore, the goal of austerity and the plan to 'rescue' the economy from financial crisis rests on the creation of a precarious workforce to enable national interests to save and make money at the cost of workers. This is done through the creation of a flexible workforce and a reduction in the number of alternative job opportunities, which serves to create a cheaper labour pool (Sears, 1999, p. 100). While some academics view the changes toward a more flexible and fluid labour market as being freed from the constraints of bureaucratic employment (Vallas & Prener, 2012, p. 332), the majority disagree. Those in disagreement realize that although this rearrangement of

work may aid those privileged few at higher levels of society, it is an uneven dispersion that

concentrates the benefits at the top, and leaves those at lower levels further disadvantaged

(Vallas & Prener, 2012, p. 332; Prosser, 2016, p. 951; Gallie, 1991, p. 320). Although full-time

permanent employment is still the norm, it is becoming less common and different populations

of workers are affected differently (Vosko et al, 2003, p. 1).

Polarization and dualization are two theories that examine the disparity of the effects of

precarious work resulting from austerity, and as such will be used in this examination.

Dualization examines how the processes effect differing sections of the workforce in diverse

ways, benefitting one section while disadvantaging another (Prosser, 2016, p. 951). Polarization

looks specifically at how those at higher levels benefit from austerity's economic restructuring

and how those at the bottom are further disadvantaged and trapped in low skilled jobs (Gallie,

1991, p. 320). Tied to polarization and dualization is the selective deregulation of the labour

market (Prosser, 2016, p. 320), which aids in precarious work being more common for already

disadvantaged groups and occupations, such as the service sector (Gallie, 1991, pp. 321, 327).

Within the disadvantaged sections of the workforce are workers who struggle to subsist during

the economic restructuring that they are told will make everything better, but which are making

life more difficult. Many authors agree that visible minorities, recent immigrants, those under 25,

and those with lower education are more likely to work precariously (Cunningham et al, 2016, p.

462; Vallas & Prener, 2012, p. 335; Vosko et al, 2003, pp. 1-2; Scurry & Blenkinsopp, 2011,

p.646).

Gender is also recognized by many authors as affecting the likelihood of precarious work,

although there is a disagreement on its effects. Vosko et al (2003) states that women are more

likely to be in precarious work (p. 1), while Vallas & Prener (2012) state that a declining number

of women and increasing number of men are more likely to have precarious employment (p.

335). The two authors appear to agree that women are more likely to have precarious work than

men, but that men are moving into more insecure employment than in the past, taking on jobs

previously occupied by women (Vosko et al, 2003, p. 2; Vallas & Prener, 2012, p. 335). In

addition, gender roles can affect the reasons behind taking on part-time employment and other

non-standard work arrangements, demonstrating the importance of considering this variable in an

analysis of precarious work (Vosko et al, 2003, pp. 1-2). For example, women's reproductive

roles linked to child birth and rearing may lead mothers to take on part-time employment which

enables them to work during school hours, and be home when there child is home.

Another factor which affects the dispersion effect of precarious employment is

educational attainment. However, there is a tension here as well. On one hand, it is stated that

highly educated workers are more likely to continue to expand their careers and opportunities,

while those with education at the college level or under will be disadvantaged (Vallas & Prener,

2012, p. 334). However, underemployment is becoming more of an issue for university graduates

as well (Scurry & Blenkinsopp, 2011, p. 646), which may speak to a lessening of the gap

between employment benefits based on educational attainment.

Polarization and dualization due to austerity are not the only theoretical models which

explore the changes to the labour force. Technological change has also been suggested as an

alternative to austerity as a cause of labour market restructuring (Cunningham et al, 2016, p. 458;

Gallie, 1991, p. 319). However, this theory is not as prevalent in the literature and is given less

credibility on its own and is predominantly viewed as a footnote in the larger system of austerity.

The main take-away from the examination of technological development is its discussion of

changes in skill level, especially regarding the service sector. There are three theories put forth

regarding the changes in skill levels within the economic restructuring. The first, polarization:

those at the top maintain the benefits of their high skilled, high paying jobs; while those at the

bottom are trapped in low skilled, low paying employment (Gallie, 1991, p. 320). Second, due to

technological developments work is now more complex (Gallie, 1991, p. 319). Therefore, even

manual labour now tends to be more highly skilled, although this is not always the case, such as

in automating systems which reduce jobs to the same minor step in an assembly line (Gallie,

1991, p. 319). This theory for the changes of labour due to technology is the least prevalent, and

although this theory came about after Marx's death, his concept of alienation speaks almost

directly to this point: "since the worker has sunk to the level of a machine, he can be confronted

by the machine as a competitor" (Marx, 1959, p. 5). Another view, positions technology as not

necessarily elevating manual labour, as Marx notes, but rather has led to a rather Charlie

Chaplin-esque, cog in the machine reality, which has routinized and dehumanized labour rather

than elevating it (Thorpe, 2009, p. 261). Lastly, the deskilling is not localized to manual labour,

overall there has been a deskilling of work, because non-manual workers lose their position of

privilege and instead become similar in skill level to manual workers (Gallie, 1991, p. 320).

Gallie (1991) notes that within the growing service sector, where there was already a higher

concentration of precarious (part-time and temporary) employment, there has been a significant

pattern of deskilling within occupational classes (p.327).

How work is defined, enacted, organized and conceptualized has never remained static

even in recent history. There are numerous causes for these changes discussed by economists,

politicians, philosophers, sociologists, and others. For a recent event which is widely agreed to

have created changes to the organization of work, let us return to the 2008 financial crisis. Many

of the events since 2008 have been propelled by austerity measures enacted by the government in

response to the economic downturn. With these changes to work, including changes to precarious work, the composition of the labour market has changed. It is important to note, that although there is a tendency to see precarious work as universally negative due to its insecurity and unfavourable arrangement for many, this is not always the case. We must realize that for some, the flexible nature of his new arrangement has been a positive move toward work which better fits in their lives (Standing, 2011, p. vii). Some students or parents for example may benefit from a flexible schedule that allows them to work at the hours that best fit their schedule. However, whether the changes are positive or negative, they must be understood.

In the study of the processes and outcomes of austerity measures following the onset of the 2008 financial crisis, work has been done to understand the changes on theoretical and empirical levels. Research has been conducted in North America and Europe to understand the real effects to the economy and its workers. However, in these studies much of the work has been done on the large scale of countries and nations, leaving a gap in understanding on a somewhat smaller scale. The changes beginning in and resulting from 2008 do not affect everyone in the same ways, especially in a country as large and economically diverse as Canada. While my research is limited to survey data and does not have qualitative information on the experiences in the daily lives of individuals, I aim to fill part of the gap by examining the Nova Scotia service sector. Through an examination of the changes to work arrangement, deskilling, and underemployment of Nova Scotia's service sector labour force, I can answer the research question. How have the changes to the Nova Scotia labour market following the 2008 financial crisis affected the composition of the province's service sector labour force? Answering this question will address those who tend to be in precarious employment to begin with, and are therefore at a high risk for negative effects of this restructuring.

Methods

Many of the variables of interest in the literature on austerity and precarious work are present in Statistics Canada's *Labour Force Surveys*. Further, due to the standardization of these monthly surveys, the values are measured in similar ways over time. Given that changes to the composition of the Nova Scotia labour force since the 2008 financial crisis are being examined, the years were chosen beginning in 2008 up to the most recent survey at the time of this research, in 2017; a middle year was chosen: 2013. As April is the beginning of the fiscal year and the first month available in all iterations of the survey, it was selected for analysis. The variables of interest were chosen to operationalize precarious work within Nova Scotia's service sector, a sector which demonstrates a high proportion of precarious labour (Cunningham et al., 2016, p.456; Gallie, 1991, p.321). The data will be organized into two categories, the first, work arrangement and the second is deskilling and underemployment. Full/part-time employment (Ya_1), multiple/single job-holders (Ya_2), flows of unemployment (Ya_3), and permanent/temporary employment (Ya_4) are used to measure work arrangement. Flows of unemployment and job permanence will be used to account for seasonal work, as well as unemployment rates among those surveyed. Number of jobs will be used to examine if people have begun to take on multiple jobs since 2008, or not, as well as whether the age, sex, and education of those who do hold multiple jobs has changed over time. Occupational skill level (Yb_1), with industry as a control, and wages (Yb_2) are used to measure deskilling and underemployment changes over time by demographic. Wages will be examined to determine if the pay-off for education has changed since the implementation of strict austerity measures in 2008.

Both sets of dependant variables will be examined in relation to the independent variables of education (X_1), sex (X_2), and age (X_3) to delve into how the conditions of precarious work vary based on demographic factors. Each dependant variable in Ya group will be examined in relation to education over time to see if the gap between those with different levels of education in each type of work arrangement has changed since 2008. In addition, sex and age will be examined to see if they change the effect of education on the outcome variables, as well as to see if there is an interaction effect (Agresti & Finlay, 2009, p. 312). This will be examined to determine if the X-values interact in their effects on the Y-variables, to see if the X-variables change the levels of Y differently when alone or in combination (Agresti & Finlay, 2009, p. 311). In the Yb group of dependant variables the gap between education levels, and the effects of age and sex will be measured as well. It is important to note that because a pre-prepared data set is being used there is no qualitative information to account for the real-life effects in people's daily lives, the human element behind the changes in the labour market. Nor does the data set account for the effects of immigration and visible minority status, which the literature suggests plays a significant role, this is therefore an additional limit to the research.

Significance levels within the tests will be determined using P-value, with an alpha level (α-level) of 0.01. The p-value is a test statistic which observes the probability of an observed value being statistically significant (Agresti & Finlay, 2009, p. 145). A small p-value, such as the one mentioned above, 0.01, means there is strong evidence of the observed values are statistically significant (Agresti & Finlay, 2009, p. 145). Due to the chosen α-level of 0.01, any outcomes which are of 0.01 or lower p-value are statistically significant in this study (Agresti & Finlay, 2009, p. 154).

The first step in processing the data was to drop all responses outside the location of

interest, leaving responses only from Nova Scotia for each year. As each incidence of the survey

is formatted similarly, the same coding could be used for each year for the most part. The values

in the industry variable were not collapsed, being left as they were and those that were not a part

of the service sector were marked missing. Service sector was defined by the Canadian

encyclopedia, and the North America Industry Classification System (NAICS) Statistics Canada

definitions of industry which were used in the original design of the survey. The combination of

the processing of these two variables enabled an examination of only the Nova Scotia service

sector. Further, occupation was reorganized into skill levels using Statistics Canada's National

occupational Classification (NOC) skill level taxonomy, resulting in five categories (Statistics

Canada, 2017). The survey itself references the use of NOC categories in the variables

addressing occupation, so the taxonomy was used to further reduce the categories into skill

levels. As all the dependant and independent variables are non-numerical, bivariate analysis

begun via examination of the association in two-way tables and graphs to see how the outcomes

of each Y was affected by each level of each X (Agresti & Finley, 2009, p.55). In addition,

bivariate regression was conducted to determine the conditional distribution between X and Y

variables. This bivariate analysis demonstrated that with the change in the levels of education,

age and sex, all the dependant variables showed changes as well.

After the bivariate level analysis, multi-variate regression was conducted in four ways

based on the nature of the variable: Ordinary least squares (OLS) regression was used for the

continuous numerical data (Hourly wage), logistic regression for categorical dichotomous y-

variables (number of jobs, full/part-time employment, and job permanence), ordinal logistic

regression for the ordinal level variables (occupational skill level), and multinomial logistic

regression for non-ordinal categorical data (flows of unemployment) (Agresti & Finlay, 2009, pp. 354, 512). Each type of regression is analyzed in slightly different ways, but the same information can be gathered from each: the effect of the level of X on the level of Y while accounting for all other X's, and the direction of that effect at each value level a well as the strength of the effect. In addition, through regression the statistical significance of these effects, and the models themselves can be determined. The utilization of multi-variate regression also enables an exploration of the changes in the effects of the X-variables on the Y-variables across time to examine the changes that have resulted from austerity measures, from 2008 to 2013, to 2017. An additional way the multi-variate regression is analyzed is through the margins. The margins are the output of regression which provide the average predicted response for each group within the sample (Graubard & Korn, 1999, p. 652). This allows for an analysis of which outcomes have the highest predicted probability, therefore, which outcome is most likely for a specific demographic group in each dependant variable.

One additional limitation of this research, due to the organization of the industry and occupation variables, narrowing them down to include only service sector workers was not perfect, and may contain a measure of error that would not have been present had the variables been organized with this research in mind. The industry and occupation categories in the Labour Force Survey did not align neatly with the categories of skilled and unskilled, nor with service sector and non-service sector. Within each industry the occupations were not broken down to easily identify which jobs fell within the categories, nor what the skill levels of those jobs. This led to an imperfect coding of the variables for the purpose of the study, although the documentation for the study and the NOC classification system were consulted in the coding process.

Analysis/Findings

Work Arrangement

Many of the authors who discussed precarious employment mention an increase in multiple job holding as an affect of austerity restructuring. However, they did not mention which groups of workers would be involved in the labour market with multiple employers. While controlling for all other variables, as expected in 2008 and 2013 at least, women were more likely than men to have multiple jobs. However, each year men's likelihoods for multiple job holding did increase, despite still showing less predicted probability of holding multiple jobs than women. As the literature predicted in 2008 and 2013 the youngest group, 15 to 19-year-olds, was one of the only groups to be more likely to have multiple jobs than 20 to 29-year-olds. There were unexpected results in 2008 and 2017; the only group other than 15 to 19-year-olds in 2008 more likely to have more than one job were 40-49-year-olds. Further, in 2017, although more age groups were expected to be involved in multiple job holding, it was not anticipated that 15 to 19-year-olds would now be less likely than 20 to 29, and 50 to 59-year-olds to have multiple employers. It was also interesting to see in multivariate logistic regression that those with higher education were more likely to have multiple jobs in all three years. Due to these unexpected outcomes, interaction equations and margins were run.

The interaction had to be run separately for men and women, meaning that their odds cannot be compared. However, the relationship to each individual reference group of 20 to 29-year-olds can still be examined [table 1]. In 2008 and 2013, men aged 15 to 19 and 30 to 60 and above, predominantly have odds which place them as being less likely than 20 to 29-year-old maen to have multiple jobs. Women aged 15 to 19 and 30 and older in these years however, are more likely than 20 to 29-year-old women to have multiple jobs. In 2017, both men and women

20 to 29-year-olds are more likely to have multiple jobs than their reference groups of the same

gender. Overall, there is a trend for both groups which shows an increase in the likelihood of

holding multiple jobs. However, men with post secondary education who were 50 to 59-years-

old did show the largest increase in probability of holding multiple job, with an increase in odds

of 10.93. For men, as age increased within each education level the likelihood of multiple job

holding increased as well, up to the 40 to 49-age-group. After this age group the odds decreased

again. For women in 2008, the university educated groups were the only ones less likely to be

multiple job holders than high school educated 20 to 29-year-olds.

The post-secondary certificate program categories were more likely to hold multiple jobs

as they increase in age, peaking at the 50 to 59-year age range before decreasing again. In 2013,

again there were more groups of men than women who were less likely to have multiple jobs, but

fewer than in 2008. Now, in 2013, those men age 15 to 19 and 50 to 60 and over, educated with a

post-secondary certificate, and those aged 50 to 59 with a university education are more likely to

have multiple jobs than high school educated 20 to 29-year-old men. The remainder of the

education and age combinations for males are less likely to have multiple employers. Women in

2013 also demonstrated an increase in number of groups who are more likely to have more than

one job. For women in this year, only university educated 50 to 59-year-olds are less likely to

have multiple jobs.

In 2017 the number of categories for males with multiple employers increased, and for

both men and women the odds increased significantly in a number of categories. For men, only

post-secondary educated 15 to 19-year-olds, and university educated individuals aged 60 and

over are not more likely than high school educated 20 to 29-year-old men to have multiple jobs.

For women, the groups which share that description are: post-secondary educated 15 to 19 and 40 to 49-year-olds, as well as university educated 40 to 49-year-olds.

A few groups showed a more dramatic increase in the odds od holding multiple jobs. For males the groups are post-secondary educated 30 to 39, 40 to 49, and 50 to 59-year-olds whose odds increase to 9.1, 5.12, and 11.07 respectively, which is a huge jump from all previous years and other groups, as the highest odds seen in groups outside 2017 was 4.9 for post-secondary educated 50 to 59-year-olds in 2008. The outlier for women in 2017 is university educated women over the age of 60, who have the highest odds of multiple job holding for any female category: 5.63. Therefore, as hypothesized by the literature, since 2008 there has been an increase in multiple job holding, though the majority still hold only one job.

As with number of jobs, job permanence displayed an odd relationship with education in each year of study – a negative one. The data suggests that the more highly educated the individual working in the service sector, the less likely they are to have a permanent job in Nova Scotia, based on the sample. The regression for 2008 demonstrated that post-secondary educated service sector workers were more likely to have permanent employment than those with only high school education. In addition, those with university education were less likely than high school educated respondents to have permanent work during this time. In 2013 and 2017 those with post-secondary certificate program education joined those with university education, with odds lower than high school educated respondents for having permanent work. While university educated respondents did remain less likely than high school educated ones to have permanent employment, their odds did increase in 2013, and again in 2017. This change brought the odds to 0.92. For reference, odds of 1 would correspond to no difference from the reference group. This means that university educated service workers were close to showing no difference in job

permanence from those with a high school education in 2017. In 2013, those with post-secondary

education also had odds close to one, but in 2017, the odds decreased again.

Further changes between 2008 and 2017 occurred for both gender and age. Despite the

education and gender variables not being statistically significant on their own in regression,

overall there is a good model fit, and the margins are all statistically significant at the 0.001

level. While holding all others constant, in 2008 women were less likely than men to have

permanent employment, both in the original regression and in the margins. However, in 2013

men became less likely than women to have permanent employment by a very small margin.

This finding is contrary to the literature, which positions women as less likely to have permanent

employment overall. Age showed the least impact on which groups were likely to have

permanent employment over the years studied. In each year, 15 to 19-year-olds are the least

likely to have permanent employment which agrees with the predictions in the literature. As does

the fact that in 2008 and 2017, 15 to 19-year-olds are in fact the only age group less likely than

20 to 29-year-olds to have permanent employment. The literature predicted that although

permanent employment would still be the norm, that there would a decrease in the number of

those with permanent jobs. Due to the nature of the education system and labour laws 15 to 19-

year-olds are always understood to be less likely to have permanent employment than all other

age groups. In 2013 though, those over the age of 60 were also less likely than 20 to 29-year-olds

to have permanent jobs. This may be due to several factors, from a devaluing of the employment

of those who are older, to a need to return to the workforce due to insufficient pensions. The age

which has the highest likelihood of having permanent employment was 40 to 49 in 2008 and

increased up to 50 to 59 for 2013 and 2017, demonstrating an aging working population and a

longer road to finding permanent employment. Further, overall each year the odds of permanent

employment for ages 30 to 60 and above increased, with the exception of those 60 and above in

2013 as already mentioned. For example, 40 to 49-year-olds went from odds of 1.96 in 2008, to

2.14 in 2013, and 3.15 in 2017. Even those odds which decreased from 2008 to 2013, like those

aged 60 and above, increased in 2017 to be higher than they were in 2008.

Due to the odd relationship between job permanence and education, a test for interaction

effects was conducted to see if those with more education were still less likely to have permanent

employment than the high school educated groups. In 2008, both post-secondary and university

educated men of all ages were more likely than high school educated 20 to 29-year-olds to have

permanent jobs. The odds for post-secondary were higher for those 50 and above, and for those

with university education between 30 and 40 years of age. For women however, post-secondary

educated 30 to 39, and university educated 40 to 49, and 60 plus year-olds were all less likely to

have permanent employment. One possible explanation for this which was discussed in the

literature is life-cycle occurrences, such as pregnancy, retirement, or time spent devoted to their

career. In 2013, men have more groups who are less likely to have permanent employment: post

secondary educated 15 to 19, 40 to 49, and 60 plus. While for women, only post-secondary

educated 15 to 19-year-olds are less likely to have permanent employment. In 2017, men return

to having all categories of age and education combinations in the category of being more likely

to have permanent employment. Women on the other hand become far less likely to have

permanent employment. The only groups of women more likely to have permanent employment

in 2017 are: post-secondary educated 15 to 19-year-olds, and those over 60, as well as university

educated 50 to 59-year-olds. While many of the values themselves are not statistically

significant, overall the interaction models are all a good fit at the highest level of statistical

significance. While the individual values are not accurate, the overall trends do represent the population studied.

While the unemployment variable only has between 255 and 306 respondents in a given year of study, that still makes up between 8.74% and 10.75% of the sample for each year. This means that the percentage of respondents in the unemployment variable out of the whole sample is larger than the Nova Scotia unemployment rates for each year, between 7.6% and 9.1% respectively (Statitics Canada, 2018). Therefore, although the number of respondents seems low for the variable that is because within the population, compared to those who are employed, the number of those who are unemployed is low. With this is mind, we can begin an examination of the reasons people gave for why they are unemployed.

The reason for unemployment was examined in terms of whether they are job losers or leavers in comparison to new, future, and re-entrants; this was done via multinomial regression. In the 2008 service sector, post-secondary certificate program and university educated groups are less likely to be job losers than those who have only a high school education, which was predicted by the literature. Only those in the post-secondary category were less likely to be job leavers than high school educated entrants. In 2013 both post-secondary and university educated groups remain less likely to be job losers, but post-secondary are now more likely to be job leavers than high school or university educated service sector workers in Nova Scotia. Then in 2017, university is the only educational group less likely to be a job leaver or loser, while post-secondary is more likely to be both than either the high school or university groups. Women in every year are less likely than men to be job losers or leavers than entrants. Last in this regression model, age. In all three years, 15 to 19-year-olds are the only group less likely to be job losers than entrants. However, in each year the age group most likely to be job losers

decreases. In 2008 it was the 50 to 59 age group, in 2013 it was 40 to 49-year-olds, and in 2017

the age group most likely to have lost their jobs, rather than having left it, decreased again to be

those in the 30 to 39-year age range. Job leavers have a bit more variation in their composition.

In 2008, 15 to 19 and 30 to 39-year-olds were less likely to be job leavers than entrants. In 2013,

only 15 to 19-year-olds are less likely to be job leavers. Further, in 2017 15 to 19, 30 to 39, and

50 to 59-year-olds were less likely to be job leavers than entrants. There is no discernable pattern

in the relationship between job leavers by age, with the exception of 2017 where there are more

groups who are less likely to be job leavers. Overall, of those who are unemployed, those who

were job leavers decreased between 2008 and 2013. Then in 2017 the number of those who left

their jobs, rather than having lost it, rose again. In 2017 the increase brought it up to be higher

than 2008. That being said, the range is still very small, with 11.32% to 13.48% of those

unemployed having reportedly been job leavers.

  Each education level within each year has a similarly shaped distribution for men in

regard to being job losers [graph 1]. In 2008, high school males' margins increased from 15 to

19-year-olds up until ages 30 to 39, reaching 65.31%. They then dipped at ages 40 to 49 to

55.19%. For those 50 to 59 there was an increase to 76.71, which is above the levels at which the

30s sat and is the highest margin for high school educated men. For those over 60-years-old the

predicted probability dips again to 53.21%, which is just above the levels of the 15 to 19 age

group. The shape is maintained in 2008 for post-secondary and university educated respondents

in the service sector as well. This means that 50 to 59-year-olds have the highest predicted

probability for being job losers, then those aged 30 to 39, with 15 to 19-year-olds having the

lowest margins in each educational level in 2008.

The distribution of female service sector worker job losers shares a similar shape to that of the males, but with a few shifts of the age categories, and with lower margins overall [graph 2]. For women the distribution is more irregular between years than men. Female service sector workers within all education levels in 2008 also have the highest levels peak at the age range of 50 to 59, the second highest are those between 30 to 39. There are a few deviations from the men's distribution. For those with high school education, the distribution has the same shape as men's, but in the post-secondary category those aged 40 to 49 with 11.27%, have a lower predicted probability than all groups. That is with the exception of those between 30 and 39-years-old, with a predicted probability of 7.37%. In other years, those who are between 40 and 49 have levels that are higher not only than those in their 20s, but those over 60 as well. The university educated groups share the same distribution shape as men, except that there are no cases for those over 60-years-old. In 2013, men's margins increased up until the highest peak, that of 40 to 49-years-old, dipping down for those between 50 and 59, and peaking at the second highest level for those aged 60 and above for each educational category. For women on the other hand the first, and highest peak is between the ages of 30 and 39, with a decrease for 40 to 49-year-olds and the second highest peak between 50 and 59-years of age, and another dip for the 60 and above category.

Men in 2017 share the same distribution as women in 2013, whereas women in 2017 have shifted their distribution again. The first peak for female job losers in 2017 is ages 20 to 29 in all educational groups, then a decline for 30 to 39-years of age, which continues until ages 50 to 59. The category of those over 60 is the second peak, which is just barely less than the levels at 20 to 29 years of age. The peaks in each year for each gender, age, and education combination are those with the highest predicted probabilities of being job losers than entrants. That is, in all

education groups in 2008, ages 30 to 39 and 50 to 59 have the highest predicted values for being

job losers for men and women. In 2013, the highest predicted probabilities are those aged 40 to

49 and 60 plus for men, and 30 to 39 and 50 to 59 for women of all education groups. Further, in

2017 for men the highest margins in all education groups are those 30 to 39 and 50 to 59, while

for women it is those aged 20 to 29 as well as those over 60-years of age who have the highest

predicted probability for being job losers. Overall, each year studied shows that the percentage of

those who are unemployed due to job loss has increased, albeit by 0.08% from 2008 to 2013, and

0.82% from 2013 to 2017. While the literature did say there was an increase in lay-offs, this

increase in job loss does not reflect the large-scale rise in firings that were predicted.

The variable which addresses full and part-time employment status is not one which can

make claims about the population due to its small sample size, unlike flows of unemployment.

Between 2008 and 2017 there were only 443 to 535 respondents for this variable employed in

Nova Scotia's service sector, which is only 8.74% to 18.7% of the total sample size of those

studied. However, we can still understand what the outcomes for the variable meant for those

who answered the question. Of those who answered this variable, university educated

respondents were less likely to be employed full time than high school educated respondents in

the service sector in 2008 and 2017, while holding all else constant. In 2013 the post-secondary

and university groups switched places, with the university educated becoming more likely to be

employed full time, and those with a post-secondary education being less likely to be employed

full time, than high school educated workers in the service sector. However, the education

variable outcomes are not statistically significant except in one case. In 2008, those with

university education were significant at the 0.01 level. Overall however this regression does have

a good model fit overall, at the 0.001 level. Additionally, most of the variables in the gender and

age variables are statistically significant, although the sample is too small to be representative. In each of the three years, women in the sample are less likely than men to be employed full time when holding all else constant. In addition, for all three years 15 to 19-year-olds are less likely to be employed full time than 20 to 29-year-olds. This could be due at least in part to participation in educational institutions, or a lack of experience. However, in 2013 there is an additional age group that was less likely than those aged 20 to 29 to be employed full time, those over the age of 60. Overall, between 2008 and 2017, the odds for each group regarding full-time and part-time employment decreases. Over the years each group is moving closer to part-time employment, although they are still more likely to be employed full time, except in the cases otherwise mentioned. Though full-time work is still the norm, this data gives evidence in support of the literature's claim that there has been a decrease in full-time employment.

Deskilling and Underemployment

Occupational skill level is discussed by numerous authors in the literature on austerity and precarious work in terms of deskilling. An examination of Nova Scotia service sector occupational skill level will reveal if the province follows the theories discussed in the literature, such as polarization. The age groups at each level of education, for men and women, remain very similar between 2008 and 2013 [table 2]. High school educated 15 to 19-year-old males and females are most likely to be employed at skill level D, with a margin of 54% for men and 60% for women demonstrating the high likelihood of employment at this level. Skill level D is the occupational skill level defined by Statistics Canada as only requiring employer provided on-the-job training (Statistics Canada, NOC, 2017). Those between the ages of 20 and 29 also with high school education, demonstrate the only difference between men and women in the high school education and age groupings in 2008 and 2013. While men between the ages of 20 to 29 with

high school education are most likely to be employed at skill level C, which requires occupation

specific training; women of the same age and educational attainment were still most likely to be

employed at level D. For all other ages in the high school attainment category, the most likely

skill level of employment remained at C. Next was the post-secondary certificate program

educated group. Here all age groups in both 2008 and 2013 demonstrate that the most likely

occupational skill level to be employed in is also level C. In this case there are three exceptions:

men aged 15 to 19 in 2013, and women of the same age range in both 2008 and 2013 – all of

which are most likely to be employed at skill level D. Lastly, without any exceptions, all ages

and both sexes with university educations are most likely to be employed at skill level A2 in both

2008 and 2013. Occupational skill level A2 is the second highest category and is composed of

"professional" jobs which usually require university education, as defined by Statistics Canada's

NOC taxonomy (Statistics Canada, NOC, 2017).

In 2008 and 2013, the higher your education, the higher your most likely skill level of

employment in the Nova Scotia service sector. However, here is a polarization that identifies

with the literature, which is evident in occupational skill level. Occupational skill level does not

increase incrementally with your educational attainment, even though as your education

increases one unit so does your occupational skill level. Instead, for those with high school and

post-secondary certificate program educational attainment the most likely occupational skill level

to be employed at is most often the second lowest (C). Then, are those with university educations

in 2008 and 2013, in this group the most likely occupational skill level of employment jumps up

two levels to be level A2, the second highest level.

In 2017, this polarization becomes even more pronounced. All respondents in the high

school educated group moved down one occupational skill level. A group which in previous

years was occupied by respondents most likely to be employed at skill level C, are now most

likely to be working in occupations in level D, with one exception. Women with high school

education, aged 40 to 49 are outliers, this group increased a skill level when all others decreased

and are now most likely to be employed at skill level B. This level tends to require college or

apprenticeship training. For the post-secondary educated groups there have been numerous

changes as well. While 15 to 19-year-old men and women stayed at level D, men aged 20 to 29

lowered a level, from C to D. Women of the same age group on the other hand, increased from

level C to level B. Then as the age of the women respondents in the post-secondary category

increased to 30 to 39-years-old, the most likely skill level rose to A2. Men aged 30 to 39 with

post-secondary education also increased, however they sat a level below women of the same age

and education, at level B. In all of the skill level categories, 30 to 39-year-old men with post

secondary education in 2017 have some of the lowest margins in this model by demographic,

with only 27%. The majority of the other margins are over 50%, with a few sitting around 30%

or 40%. This demonstrates that the most likely occupational skill level for most categories is in

the lead by quite a bit. Although women with post-secondary education remained at level A2 for

the remainder of the age ranges, men did not. For those men with post-secondary education aged

40 to 49, the most likely skill level increases 2 levels to sit at A1. A1 is the highest category and

is comprised of those in management positions. This positive relationship between age and skill

level for post secondary educated men ends after the age group of 50 to 59. Men with post

secondary education aged 40 to 59 also have margins of 27%, which are among the lowest in the

model as well. Those men with post-secondary education aged 60 and above however, have the

lowest margins, sitting at 23%, and they drop down to being most likely to be employed at the

lowest occupational skill level, D. While there is no way to tell from this data alone what the

causes of this lowering of skill level, it can be speculated based on the literature. It is possible

that this drop is due to a devaluing of older male workers, their work is worth less as they age

therefore they are positioned in lower skilled jobs. It may also be that older male workers re-

enter the work force due to a need for income, or that they feel the need to leave the house and

socialize and see employment as a solution, and are only taking on part-time low skilled jobs by

choice; or again their work is devalued so they are not hired in higher skilled jobs.

Of those respondents with university education in 2017, women no matter the age are

most likely to be employed at level A2, which has not changed from the higher ages of those

with post-secondary, or since 2008. Men employed in the service sector with university

education aged 20 to 39, and 60 plus are also most likely to be employed at level A2. However,

ages 40 to 59 are most likely to be employed at occupational skill level A1. This data therefore

demonstrates an increase in the disparity of most likely occupational skill level of employment

by education. With those who achieved high school education decreasing to the lowest level,

there is a gap between skill level of employment for those with high school and post-secondary

education which did not exist previously. The gap in the margins for this increased polarization

are still quite high in most cases. However, in the cases where the margins are lower than most,

the gap between the most likely occupational skill level and the runner up ranged from 1.39% in

the case of those aged 60 and above, to 7.95% for those between 30 and 39. In each case, as the

age increased, the difference decreased. Additionally, for the groups those between the ages of

30 and 59 the runner up for highest margins was always one category less than the highest, so B

became C and A1 became A2. However, the discrepancy is once again located at 60 and above,

here D was the most likely occupational skill level to be employed in with the second most likely

was level B. Overall, the data shows a deepening of the polarization between those with the

highest level of educational attainment measured, and those with the lowest. Evident in the 2017 data is also a difference in how men and women are affected by the shifts, with men having some categories that are now most likely to be employed at the highest occupational skill level, while the women do not reach above A2 in any cases.

Income is also examined in relation to education, sex, and age to see if there is a widening or narrowing of the payoff for education; or if there is no change over time at all. In 2008, minimum wage was $8.10, in 2013 it was $10.30, and in 2017: $10.85. This is an increase of $2.20 from 2008 to 2013, and $0.55 from 2013 to 2017 (Government of Canada, 2017). However, not all age, gender and educational categories increased the same in response. For example, the predicted probability for the income of a high school educated women, aged 15 to 19 is $9.23 in 2013, which is below minimum wage. Each year has very similar distributions of income by age in each of the education and gender categories. In the initial regression, both post-secondary and university educated groups were shown to earn more than those with high school education in all years. In addition, women in all years were demonstrated to make less than men. However, in 2008, the peak for maximum pay was reached in the 40 to 49 age category for both sexes, while in 2013 and 2017 it was not reached until the 50 to 59-year age group. In all three years the income for those in the group over 60 decreases and becomes similar to the income displayed for those aged 30 to 39, if not a small amount above. This significant drop in wages could be due to the same reasons as for those aged 60 and above who were demonstrated to be employed in lower skill levels, these low wages would make sense if someone was employed in skill level D. Lastly, in all three years, 15 to 19-year-olds were expected to make less than 20 to 29-year-olds, while all other age groups were expected to make more.

Overall, the relationship between age and income is positive, up to the 40 to 49 or 50 to 59 age groups. The relationship between education level and income is also positive for each year. Additionally, the relationship between time and income is positive between each year in each age, education, and gender category. The 2008 model accounts for 34% of error, while in 2013 and 2017 the models account for 26% of error.

Although in all cases men have higher predicted probabilities for income, the two sexes do share something in common. In 2008, no matter the sex or age the difference between high school and post-secondary predicted incomes was always $2.68 [table 3]. Further, between post-secondary for both sexes and all ages the difference in income is always $7.95 in 2008. In 2013 the income difference between high school and post-secondary is $3.95 and between post-secondary and university is always $7.29. Lastly, in 2017 it is $4.44 and $8.31 respectively. This means that in 2008 the difference in earnings between the lowest and middle education levels, and middle and highest education levels is $5.27. While in 2013 the difference is $3.34, and in 2017 it is $3.87. Therefore, the payoff for higher levels of education lessened overall between 2008 and 2017. However, though the gap did decrease between 2008 and 2013, it did rise slightly between 2013 and 2017, which is still a significant reduction from 2008. This could be indicative of a widening of the gap in income between different education levels moving forward, but the overall trend depicts a reduction in returns for education under austerity, as discussed in the literature.

Conclusion

As expected, there is evidence that suggests changes in the composition of the service sector labour force in Nova Scotia since the 2008 financial crisis. There has been a general trend

depicting an increase in multiple job holding, and a decrease in permanent employment between 2008 and 2017. In addition, while unemployment due to job loss has increased, it was a very minute change of 0.9%. However, unemployment increased overall between 2008 to 2013 and to 2017 in the sample, from 8.74% in 2008 to 10.75% in 2017. In each year, the unemployment rate was higher in the sample than that which Statistics Canada released. Further, there has been a polarization of the occupational skill levels each group (of education, age, and sex) is most likely to be employed in. Lastly, as predicted by the literature, there has been a decrease in payoff for higher educational attainment in the Nova Scotia service sector since 2008. Although many of the overall trends found in this study agree with the literature, something which was also noted by authors was that education, age, and sex would complicate the changes for each dependent variable examined.

This study gives information which describes the realities of the affects of the 2008 financial crisis on Nova Scotia's service sector composition, which was missing from the literature. However, there is still a gap because this research does not delve into the other employment and occupation sectors in Nova Scotia, let alone in other regions and countries. This is one area which could be explored in future research; the exploration of other sectors and regions. In addition, future research could examine the actual lived experiences of workers, the qualitative realities behind the statistics presented here.

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Appendices

Table 1: Regression Number of Jobs, Interaction Education and Age by Gender

	2008		2013		2017		Legend
	male	female	male	female	male	female	
	Odds	Odds	Odds	Odds	Odds	Odds	Less likely to have multiple jobs than reference group
education/age							
PS/15 to 19	0.6232	1	1.033	1	1	1	
PS/30 to 39	0.4745	1.375	0.406	3.607	9.10	2.00	No change from reference group
PS/40 to 49	0.7758	2.835	0.355	2.654	5.12	0.35	
PS/50 to 59	0.1396	4.946	2.584	1.396	11.07	1.54	More likely to have multiple jobs than reference group
PS/60 +	0.2360	1	1	1.163	1.51	1.16	
Uni/30 to 39	0.5769	0.416	0.420	1.316	2.60	3.56	
Uni/40 to 49	0.9622	0.372	0.379	1.289	2.17	1	
Uni/50 to 59	1	1	2.101	0.701	3.21	3.08	
Uni/60+	1	1	1	1	0.43	5.63	

Data Source: Statistics Canada Labour Force Surveys, April 2008, 2013, 2017

Graph 1: Age Distribution by Education Level and Year for Male Job Losers
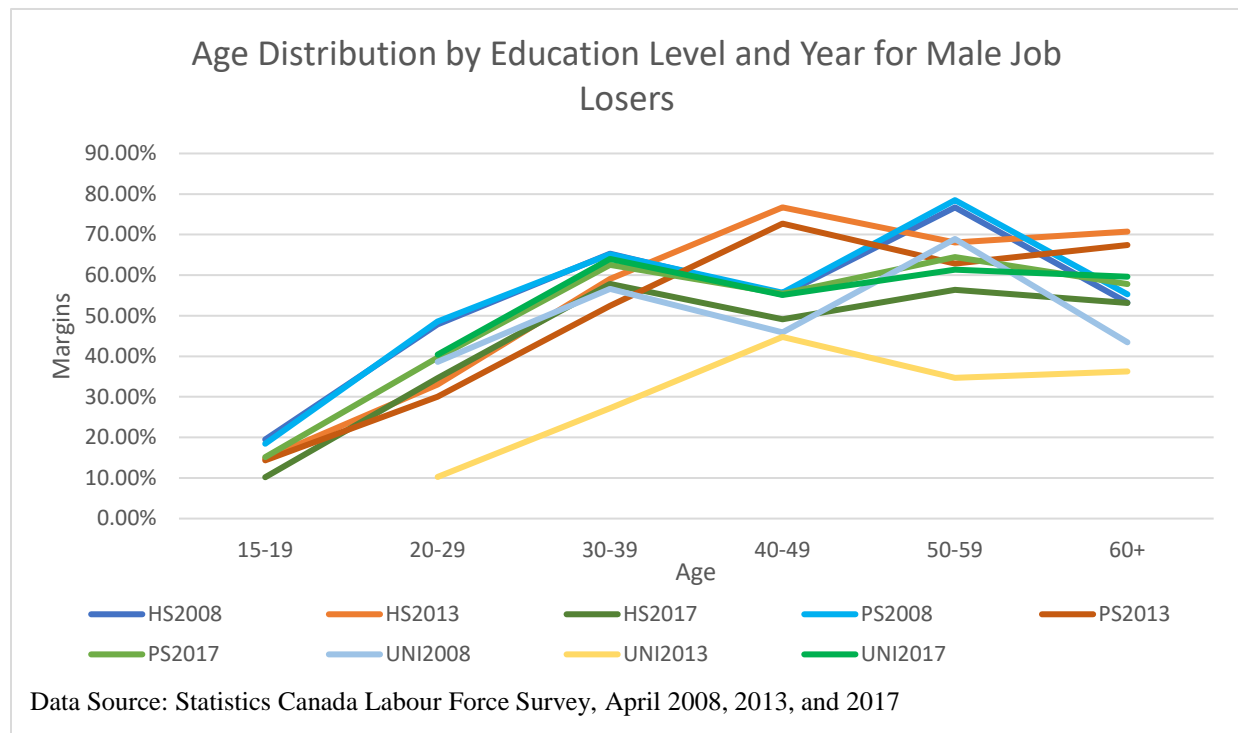
Data Source: Statistics Canada Labour Force Survey, April 2008, 2013, and 2017

This depicts each year in a similar colour across education levels to allow for a better comparison of the shape within each year for each education level. As you can see, each year has a similar shaped distribution for each education level for male job losers.

Graph 2: Age Distribution by Education Level and Year for Female Job Losers
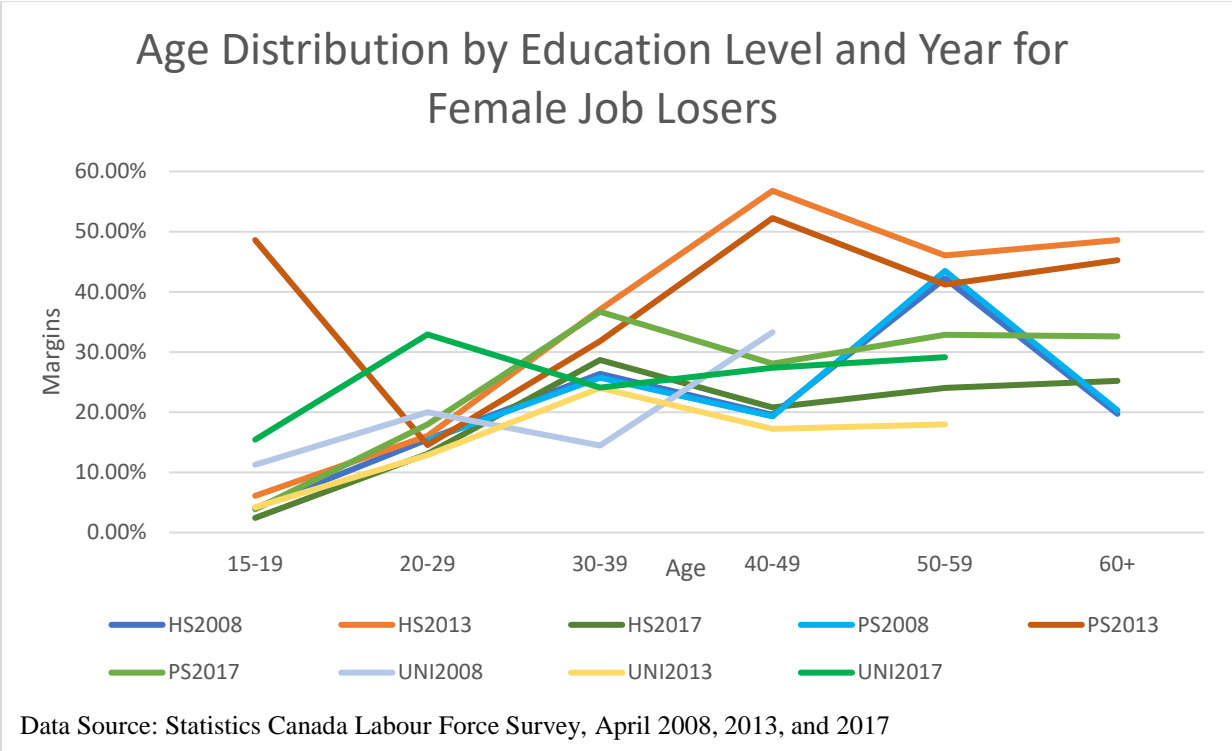
Data Source: Statistics Canada Labour Force Survey, April 2008, 2013, and 2017

This depicts each year in a similar colour across education levels to allow for a better comparison of the shape within each year for each education level, for female job losers.

Table 2: Most Likely Occupational Skill Level by Category, with Margins

	Age	High School						Post-Secondary Certificate						University				
		15-19	20-29	30-39	40-49	50-59	60+	15-19	20-29	30-39	40-49	50-59	60+	20-29	30-39	40-49	50-59	60+
2008	male	D	C	C	C	C	C	C	C	C	C	C	C	A2	A2	A2	A2	A2
	Male Margins	54%	46%	44%	44%	44%	46%	40%	50%	42%	41%	42%	42%	40%	44%	42%	46%	53%
	female	D	C	C	C	C	C	D	C	C	C	C	C	A2	A2	A2	A2	A2
	Female Margins	60%	45%	48%	48%	49%	50%	40%	51%	48%	47%	48%	48%	47%	58%	58%	60%	66%
2013	male	D	C	C	C	C	C	D	C	C	C	C	C	A2	A2	A2	A2	A2
	Male Margins	60%	40%	40%	42%	36%	42%	39%	44%	40%	43%	37%	44%	48%	47%	35%	44%	46%
	female	D	D	C	C	C	C	D	C	C	C	C	C	A2	A2	A2	A2	A2
	Female Margins	71%	49%	40%	45%	39%	44%	49%	40%	42%	47%	40%	46%	55%	60%	49%	60%	61%
2017	male	D	D	D	D	D	D	D	D	B	A1	A1	D	A2	A2	A1	A1	A1
	Male Margins	77%	59%	37%	32%	38%	41%	57%	37%	27%	27%	27%	23%	43%	45%	43%	41%	34%
	female	D	D	B	D	D	D	D	B	A2	A2	A2	A2	A2	A2	A2	A2	A2
	Female Margins	69%	51%	35%	31%	36%	37%	46%	30%	34%	39%	41%	40%	63%	69%	69%	71%	72%

Data Source: Statistics Canada Labour Force Survey, April 2008, 2013, 2017

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Table 3: Differences in Earnings Between Levels of Educational Attainment

	2008	2013	2017	difference 2008-2013	difference 2013-2017
HS to PS	$ 2.68	$ 3.96	$ 4.44	$ 1.28	$ 0.48
Ps to Uni	$ 7.95	$ 7.29	$ 8.31	-$ 0.66	$ 1.02
difference	$ 5.27	$ 3.33	$ 3.87	-$ 1.94	$ 0.54

Data Source: Statistics Canada Labour Force Survey, April 2008, 2013, and 2017