

Steinsultz, Linda

**Working Paper**

## Inequality of wealth for never married women in Canada, Germany, Sweden, and the United States

LIS Working Paper Series, No. 437

**Provided in Cooperation with:**

Luxembourg Income Study (LIS)

Suggested Citation: Steinsultz, Linda (2006) : Inequality of wealth for never married women in Canada, Germany, Sweden, and the United States, LIS Working Paper Series, No. 437, Luxembourg Income Study (LIS), Luxembourg

This Version is available at:

<http://hdl.handle.net/10419/95418>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

# Luxembourg Income Study Working Paper Series

Working Paper No. 437

Inequality of Wealth for Never Married Women in Canada,  
Germany, Sweden, and the United States

Linda Steinsultz

June 2006



---

Luxembourg Income Study (LIS), asbl

---

INEQUALITY OF WEALTH FOR NEVER MARRIED WOMEN IN CANADA,  
GERMANY, SWEDEN, AND THE UNITED STATES

DR.LINDA STEINSULTZ

JUNE 2006

**Abstract**

The impact of aging has become a global concern due to the increasing number of older people in many industrialized countries. Today there are more older women than any other time in history. Living longer may become a burden rather than a blessing if lived out in poverty. This study investigated the relationship between individual characteristic of never married older women and wealth. The survey data was collected by the Luxembourg Income Study (LIS) for this quantitative investigation. Three age cohorts (young 50-59, middle, 60-69, and old 70+) were examined with marital status, country (Canada, Germany, Sweden, and United States), and level of education in a sample of 5885 women. The findings of the study indicated that education, age and marital status were significant predictors of wealth in the US, Canada, and Sweden, although marital status was reversed for Sweden. While education and age were significant predictors of wealth for women in Canada, marital status was not a significant predictor. The results comparing education and age of never married women to married women were significantly correlated to wealth. Comparability is a source of controversy in social sciences and creates limitations for doing comparison of concepts on income distribution statistics.

Keywords: education, wealth, poverty, inequality.

## **Introduction**

The impact of aging has become a global concern due to the increasing number of older people in many industrialized countries. Individuals are living longer (U.S. Bureau of the Census, 2000); however, these extra years may be a burden rather than a blessing if lived out in poverty (Clark, Burkhauser, Moon, Quinn, & Smeeding, 2004). Preparing to meet the needs of an aging population and the importance of considering the requirements of the aging is a critical issue of the 21st century. Defining poverty in society as well as identification of the poor are important questions in today's society. One population that has been identified as living in poverty is the older persons (Payne, 1996). In order to meet the challenge of protecting and providing for the aging populations, governments will need to acknowledge aging issues concerning the economy and implement policies to address these issues (Wong, 2002).

Poverty is a condition that is relative to those involved. An individual may not realize the degree to which they live in poverty if those around them live in the same condition. Some form of poverty exists in every nation and race; however, the percentage of those considered poor is relative to that society's definition of poverty (Payne, 1996). In many countries, older women are in poverty; however, they fare better in countries such as Sweden, Finland, and Canada, and live in poorer conditions in the United Kingdom and the United States (Smeeding & Sandstrom, 2005). Older women in particular may lack financial and physical support systems that help to alleviate poverty

(Payne, 1996). Even with great strides toward reducing poverty among the older, women remain vulnerable.

Women are one group of the aging population that is growing. In 2000, there were three women for every man age 65 or older, and this ratio is increasing as the current population ages. By the year 2020, the percentage of the American population that is comprised of divorced or never married is expected to reach 25 percent as compared to 12 percent in 1991 (U. S. Bureau of the Census, 2000). When compared to men, aging women are more likely to be poor as well as dependent on family and outside sources (Blakely, 1992). Women who have never married and/or are childless will be increasing in future generations with a higher risk of living in poverty (Wong, 2002). Many women in the workplace today have never been married. Never married baby boomers make up 10 percent of the population, which is twice the rate of their parents. This trend could indicate that older women who have never married will be at an increased risk for living in poverty, or a lower standard of living due to their economic situation (Clark et al., 2004). Never married will not have the earnings of a husband to count on in their later years, a lack of support systems such as children to help them, lower pay, and single retirement income (Gornick, 1999).

Inequality in income occurs individually, culturally, and cross-nationally (Payne, 1996). For this reason, it is important to examine individual factors when examining the relationship between aging and poverty. This study examined factors of inequality of income by investigating cohorts of aging, education and marital status among older never

married women in a cross-country perspective. Wealth is considered the sum of one's assets, such as stock, real estate, and accumulated savings. Income is measured by several components, such as transfer of funds, social retirement, net wages and salaries, and child and family allowances (Smeeding & Sandström, 2005).

In other areas of research, the Bureau of Labor Statistics (2003) predicted a 33 percent increase in the number of people ages 65 to 74 in the work force in the last decade. More women are entering institutions of higher education. Since 1992, there has been an 11 percent increase in the number of women attending college with only a three percent increase in men. Additional education can help increase woman's lifetime earning potential, which is important as women, on average, live 8 to 10 years longer than men do (Francese, 2002).

Atchley and Barusch (2004) reported that Social Security helps to reduce but does not eliminate economic inequality. For example, women who never married will have benefits based on their income alone. It is important to examine variables as education and marital status as women age, as this can affect not only the amount of money they will have after retirement, but the types of jobs and pay they were able to attain during their working years.

In 1994, two thirds of the women in the United States were employed in areas such as retail, clerical, administrative support, and service jobs. Women who were in professional jobs were more likely to choose professions such as teaching and nursing. This has changed very slowly since the 1940s. Women's employment opportunity

remains relatively low status with low pay. Since money is power, the disparity between men and women's wages has consequences of more than income. Earning less has kept women in disempowered positions in the world. It can also make marriage a financial necessity for many (Anderson & Stewart, 1994).

In the 21<sup>st</sup> century, older adults will be a major economic and political force, which will cause a major change in population demographics (Spence, 1999). It is also predicted that there will be a strain on Social Security and other pension systems, health care, and other human services. The younger generation will have to bear the taxpaying burden of the aging population, while the demographic shift causes the younger generation to be smaller than the older generation they are supporting. There has been little preparation for the growth in the aging population and the possible financial impact it could have on other segments of the population. Little data exist on older workers or the differences between age cohorts. Not only has the number of older persons increased, but also a higher percentage of people are living to be 80 and 90 years old (U.S. Bureau of the Census, 2000).

Older women outnumber older men in all ethnic groups in the United States and in most other countries around the world (Cavanugh & Blanchard-Fields, 2002). Women live longer than men live with a life expectancy of 75 years (U.S. Bureau of the Census, 2000). Many are living long enough to reach the maximum life span, which is approximately 110 years (Spence, 1999). As women age and live longer, the

responsibilities of midlife that they are least prepared to master are those related to money (Anderson & Stewart, 1994).

## **Theoretical Framework**

The theoretical foundation for the study was based in part on the convergence theory paradigm (Goode, 1963), which stated that families from all cultures, due to modernization influences, would become one uniform nuclear system. The changes in household size and composition in Europe and North America over the past century is consistent with convergence theory. Women are having fewer children, marrying later in life or choosing not to marry. They are entering the workforce at greater numbers than ever before (Chittenden, 2001).

Human capital theory (Becker, 1993) suggests that education and work experience are factors that decrease the likelihood of poverty. Other factors associated with poverty include women's age, race, education, marital status, and families living in households (Zhan & Pandey, 2004). Contemporary research has shown that a family is not just biological, but a social construct made up of historical, social, and material circumstances such as race, ethnicity, and gender (Sherif-Trask, 2004). Payne (1996) suggested that to help prevent poverty, support systems such as friends, family, and access to resources in time of need, as well as financial support and having money to purchase goods and services are necessary. Since the never married older woman could have less family structure than the nuclear family, understanding the impact of education, race, ethnicity, and gender may clarify some of the reasons for poverty. Zopf (1989)



addressed gender as it applies to poverty by stating that young or old; one is more likely to be poor if they are female, and that woman having a college degree may be no better off than a white, male, high school dropout.

### **Purpose of the Study**

The proportion of the older people in the American population is increasing (U.S. Bureau, of the Census, 2000). Today there are more older women than any other time in history. In 1930, women comprised 50 percent of the population as compared to 59 percent in 2000 (Atchley & Barusch, 2004). With low-earning capacity of women in an unequal labor market, the problem of inequality of income for women is exacerbated (Himmelweit, Bergmann, Green, Albeida, & Koren, 2004). It is a primary concern to understand how never married women will be affected in the future, and to investigate age as a predictor of poverty. The quality of life of women depends greatly on their health and financial resources. Women have a greater likelihood of living alone and are likely to be economically vulnerable. Because of difference in life expectancy, older women are the majority group in the older population in every industrialized country (Smeeding & Sandström, 2005). The very old (people who are 85 and older) are increasing the fastest in the older population. Some trends suggest that the older poor will get poorer, while the older rich get richer (Atchley & Barusch, 2004). The oldest old, especially the older women who have survived their spouses, divorcees and especially single women living alone, have the highest chance of poverty in all nations. As these

cohort ages, they will have a pattern of lower incomes and higher poverty in most industrialized nations (Williamson and Smeeding, 2004).

## **Definition of Terms**

Education is defined by the field of study that deals mainly with methods of teaching and learning in schools. When comparing education in Canada, Germany, the United States, and Sweden, the concept of a standardized variable is based on the international standard classification of education from the LIS dataset. The highest attained level of education was used and only completed training was taken used. Education qualifications vary greatly between different country datasets. This results mainly from the different educational systems in the various countries or from different ways of surveying education. Many surveys allow for very detailed answers while others allow for much more aggregated ones. A number of surveys ask about years of education instead of highest level. LIS harmonizes or tries to make the surveys comparable, but does not standardize the information collected by surveys from different countries. When comparing educational levels across countries it is necessary to carefully look at the labels of the variables for each country, and eventually recode them to make them comparable. LIS has created a standardization routine for the education variables that transforms each country-specific educational label into a new variable with three comparable levels of low, medium, and high. Low includes no education, pre-primary, primary, lower secondary education, compulsory education, and initial vocational education. Medium includes upper secondary general education, basic vocational

education, secondary vocational education, and post-secondary education (including either shorter vocational courses or programs preparing for courses on tertiary level). High included specialized vocational education, university/college education, and post-doctorate and equivalent degrees. All else included missing, unknown, level undefined and other school degree.

Inequality is the quality of being unequal or having social disparity of distribution or opportunity. Previous research suggested that inequality is traditionally used as a measure of individual-level variables to examine unequal distributions of socioeconomic rewards (Förster, Jesuit, & Smeeding, 2002). The purpose of the quantitative study was to explore inequalities of wealth as measured by the Disposable Income Study (DPI) from the Luxembourg Income Study (LIS) project.

Poverty is difficult to describe since poverty may be considered as absolute (an inability to buy necessities) or relative (an inability to buy the lifestyle that is desired). It can show an index of disparity or a measure of a universal yardstick (Shieler, 2004). For this study, poverty will be referred to as one who lacks a usual or socially acceptable amount of money or material. Poverty is not only a financial state, but also part psychological (of the heart and mind), personal, societal and of the past and present (Shieler, 2004).

Wealth is considered the sum of one's assets, such as stock, real estate, and accumulated savings (Smeeding & Sandström, 2005). The measure of wealth and household type are defined at the household level, and individual women, or persons file

are the units of analysis using the DPI from the LIS database. Wealth, a unit of measure, is dollars, such as the value of a home or shares of stock. It has no time dimension (Clark, et al, 2004). Income is measured by several components, such as transfer of funds, social retirement, net wages and salaries, and child and family allowances (Förster & Vleminckx, 2004). Income can be a yearly flow measured over some period of time (Clark, et al, 2004). Wealth variable measured in the DPI does not include depths of the individuals, indirect taxes or public spending on social goods as health care, education, or housing subsidies. The study omitted other in-kind benefits, though they contribute significantly to overall well being (Moynihan, Smeeding, & Rainwater, 2004), particularly in the education, health care, and housing of the never married older woman.

To narrow the scope of this study (Creswell, 2003) the primary delimitations were the participants who were women. Whether the never married or married women had children, was not used for the investigation of inequality of wealth. The selection criteria were from Canada, Germany, the United States, and Sweden. Surveys from each country were collected from questionnaires for data analysis with the intent of generalizing from a sample to a population. Total that had completed a survey used 9,000 women in the LIS dataset. The participants examined in the study were married or never marry women, and in the age groups of 50-59, 60-69, and 70+. There was less in the 70+ age group because of fewer respondents to the surveys.

### **Historical Perspectives of Women**

In some American families, it was expected that the unmarried daughter care for the parents or siblings. In many cultures, women did not marry because of factors such as economics, social, political, and demographics (Simon, 1987). The never married older women were an invisible minority in history. As a wife and mother, a woman could have power, but only in a limited domestic area (Vicious, 1985). Cooper (2004) explained that this has been the history in the United States, but connecting with others that are aging can give strength to the acknowledgement and give rise to change in the future.

In some cultures, the never married older women were not favorably regarded and were subjected to many derogatory names, such as Spinster. In the past, the term Spinster referred to both unmarried males and females and the name carried status. Later it became a legal term to describe an unmarried woman and it had a negative connotation. Unmarried women have been referred to as- successful, spinsters, maiden aunts, nuns, redundant women, Blessed Singleness and Old Maids (Anderson & Stewart, 1994). These women were sometimes of wealthy households, a nurse, nanny, personal maid, or housekeeper. Single women have been viewed as deviant, sinful, or disgraceful since colonial America. Many negative attitudes toward being single women still exist today, with single women receiving less respect and often viewed as personal failures (Allen & Pickett, 1987). Being married and achieving motherhood were the valued roles.

Stereotypes of never married women have been changing toward a more modern perspective of alternative lifestyles, like gay and lesbian marriages. Attitudes on marriage and aging have slowly been changing with coming of the baby boomer era (Adams,

Blieszner, & DeVries, 2000). Famous women in the past that chose to remain unmarried were more accepted in society. One reason was that they were more educated, successful or of historical significance (having diaries or books written about them) (Allen & Pickett, 1987), for example, Jane Adams, Charlotte Brontë, and Florence Nightingale (Vicinus, 1985). Over the past century, the adult culture has developed into a slightly more egalitarian society, but human groups insist on a certain amount of conformity (Harris, 1998).

### **Issues of Aging and Women**

. Research studies concluded that never married woman may choose other ways of fulfilling this identified need or love by having partners in extended family, friendship, sex, competition, or cooperation/work with others (Allen, 1989). Allen and Pickett (1987) challenged the assumptions that never married women who live alone are socially isolated and do not have families. Researchers claim the perspective is a myth, as most never married older women have had purposeful family ties throughout their lives (Allen, 1989).

Cultural studies according to Gullette (2001) has been focused on the representation of aging. Age divisions are socially constructed, like gender and race. Ageism, prejudice against older people, minimizes or justifies economic harm to people (Atchley & Barusch, 2004). Women and minorities have not had the benefit of wisdom and respect from younger generations, and income in later years has traditionally declined (Gullette, 2001). Most studies of income distribution in relation to age have

been from a few longitudinal studies and cross-sectional age comparisons (Crystal & Waehrer, 1996). There has been little quantitative research published on examining cohorts of different age groups of older women. Few data exist on older women workers or the differences in income between age cohorts (Cavanaugh & Blanchard-Fields, 2002).

Allen (1989) conducted qualitative life history interviews of never married cohorts over a life course. Williamson and Smeeding (2004) examined three decades of older women and their private incomes and social benefits. Their results indicated that several factors facilitate poverty in old age, including how each country approaches the care of the aging as society's responsibility. Although reports indicate that earned incomes decrease with less participation in the labor force in old age (Crystal & Waehrer, 1996), less is known about the rate at which other sources of incomes also decline in old age. Countries have different policies for addressing aging benefits. In Germany, aging social security retirement benefits are currently being reduced. As changes occur in these systems, economic well being of the older persons is likely to be affected (Smeeding & Sandström, 2005).

### **Effects of Gender in Society**

Current research reported that single, older women are at a heightened risk for economic gender inequality across the industrialized countries (Gornick, 2004). Little empirical research has examined the factors associated with poverty for this population. The accessible research available for the never married women was of casual observation with little empirical investigation, even though the research available reported that single

older women are at a heightened risk for economic gender inequality across the industrialized countries (Gornick, 2004). Women find that they are inharmonious with the roles men have historically set for women, such as wife, mother and caregiver. The threat of being alone and poor generated an atmosphere of insecurity and context of vulnerability in the past. A cultural lag has developed between the sexes, with women wanting more choices and power over their lives in society today (Anderson & Steward, 1994). A different concept of aging is evolving with a more individualist explanation of aging and the standards by which to measure the status of aging economically (Chawla, 1993).

Today there are fewer pressures to get married, and more opportunities for different kinds of relationship (Trafford, 2004). Marriage, according to Cavanaugh and Blanchard-Fields (2002) continues to be a common choice among Americans including those over 65 years old. Although marriage rates are declining at younger ages (U.S. Bureau of the Census, 2000), the proportion of the older population who has never been married has decreased over the past 20 years. It is apparent according to this research that there will be an increase in the future of women choosing to stay single throughout their life course.

### **Social Dimensions of Poverty**

Two groups that are subject to poverty in society are the older persons and children (Palmer, Smeeding, & Torrey, 1988). The older persons are less in poverty at the present than children (Moynihan, Smeeding, & Rainwater, 2004). Although the welfare



of the children of a nation is a good indicator of the nations economic future, having an international comparative study of poverty factors of the older persons is very important for the future to combat poverty in old age.

The phenomena of the increasing population of never married older women (U.S. Census, 2005) and the discovery of their poverty in society has implicated a crisis that requires a paradigm shift from the nuclear family perspective to a much broader perspective of individual choices. In the last hundred years, the question of poverty is one of the most central issues of the social dimension of Europe and Western civilization (Atkinson, 2004). A paradigm shift in the understanding of gender, relationships, and families is important to the groundwork of building more healthy, nurturing, and stable family interactions in the future (Allen & Baber, 1992). More women want choices about whether to marry or whether to have children (Smith, 2001). The growth of solitary living among older women is increasing because of the importance of autonomy and privacy (Moynihan, Smeeding, & Rainwater, 2004).

The levels of poverty in Sweden are affected by its welfare state and labor market (Bergmark & Palme, 2003). Single women have employment support, paid and subsidized childcare, and social transfers. Because of these efforts, women are less dependent on male partners for income. Swedish women's employment rates are high because it is difficult for them to have a decent standard of living without working outside the home. Compared to other Western nations, Sweden's welfare state and labor

market are the most effective in reducing women's poverty relative to men's (Christopher, England, Smeeding, & Phillips, 2002).

Wolff (2003) explained wealth as a dimension of well being. Therefore, one could measure wealth as the net income less expenditures. Two people who have the same income may enjoy a higher standard of living as one person with more income or less debt. Single women have much lower standards of living than married couples, often times due to net worth or wealth. Shipler (2004) stated that poverty is hardship that cannot be defined by a government dollar limit of annual income. A 19<sup>th</sup>-century American author, Horatio Alger, coined a saying that suggested that if one worked hard enough, it was possible to rise from rags to riches (Henslin, 2005). The burden of poverty was placed on the individual and not society. The causes and solutions of poverty are not simple, and have been seriously debated. Defining poverty is very complex. According to Shipler (2004), the majority of the working poor are women in the United States.

### **Importance of Education in the Accumulation of Wealth**

Lack of education could be one cause of poverty (Payne, 1996). Income tends to rise with education in the American economic life (Sullivan, Warren & Westbrook, 2000). Poverty rates vary by level of education for older men and women (US Census Bureau, 2000). The increase in educational levels over time may help to aid in higher retirement incomes in the future for the older persons (Clark, et al, 2004). In the process of aging, an individual makes many important choices: schooling, career, marriage, parenthood, location, savings, and investing. These choices have a large and

cumulative effect on economics of the aging person including retirement, living arrangements and health care (Clark, 2004).

Education can have an effect on the poverty of women. Adair (2001) reported on the importance of postsecondary education to low-income single mothers in the United States. According to Wolff (2003), education is a matter of concern when addressing inequality of income and the resulting quality of life among different countries.

## **Methodology**

This investigation explored the relationship between individual characteristics of never married older women and income as measured by the Luxembourg Income Study (LIS). Specifically, the independent variables were three age cohorts (young 50-59, middle 60-69, and old 70+), marital status, country (Canada, Germany, Sweden, and United States), and level of education. Internationally comparable data are essential to the understanding of income inequality and its impact on societies (Atkinson, 2004). The core concept used in this study is that of disposable income. Gross wages and salaries, self-employment income, cash property income, pension income and social transfers of all household members added and income taxes and mandatory employee contributions are subtracted to yield house hold disposable income. The dependent variable was the wealth of never married women as measured by the Disposable Personal Income (DPI) using the LIS database. The measure of wealth and household type are defined at the household level, and individual women, or persons file are the units of analysis using the DPI from the LIS database. The most common unit of analysis is the household, defined

as all persons sharing the same housing unit, regardless of any family relationship (Brandolini & Smeeding, 2005).

The present study used 2000 Wave V from LIS data set. Categorical predictors, such as marital status were dummy coded for regression purposes. As a significant relationship was found for levels of marital status (never married, and married) then stepwise regressions was conducted for each of the three age groups with each of the two levels of marital status. These regression analyses were conducted on education, and for each of the four selected countries (Sweden, Canada, Germany, and United States).

The generalizability of this study may be limited by several factors. The data collection was limited to never married and married older women from four industrialized nations. The LIS database primary purpose was to supply research data to economist around the world. Potential weaknesses from the narrowed data collection should be identified to help clarify the study. The measure of wealth and household type are defined at the household level, and individual women, or persons file are the units of analysis using the DPI from the LIS database. A potential weakness of the study is the degree to which LIS incomes measure true income especially varying from country to country. The LIS survey data were collected using different questionnaires in different languages collected for different purposes. Considering these limitations, LIS used the best sources of income data available for each of its member states (Förster & Vleminckx, 2004).

## **Results of Research**

The low-earning capacity of women in an unequal labor market often leads to a problem of inequality of income for women (Himmelweit, Bergmann, Green, Albeida, & Koren, 2004) It is important to investigate how being single and aging affect poverty.

### *Demographics*

The sample from four countries (United States, Sweden, Germany, and Canada) included 5885 women. As shown in Table 1, the majority of participants were from Sweden (37.0%) and the United States (33.9%), followed by Germany (15.2%) and Canada (13.9%). Almost three quarters of the sample was in the 50 – 59 age group (72.0%), followed by the 60 – 69 age group (23.6%). Only 4.4% of the sample was in the 70 and above age group. Most of the women were married (86.7%), with 13.3% of the women being never married. Almost half of the participants were coded as having a medium education level (47.1%), followed by high education level (31.3%), and low education level (21.0%). Table 2 shows the frequencies and percentages of these categorical variables by country.

---

Table 1

*Frequencies and Percentages of Demographic Variables (N = 5885)*

---

	<u>Frequency</u>	<u>%</u>
Country		
United States	1995	33.9
Sweden	2177	37.0
Germany	895	15.2
Canada	818	13.9
Age		
50-59	4237	72.0
60-69	1391	23.6
70 +	257	4.4
Marital Status		
Married	5103	86.7
Never married	782	13.3
Education Level		
Low	1237	21.0
Medium	2773	47.1
High	1844	31.3

---

Note: Frequencies not adding to 5885 and percentages not adding to 100 reflect missing data. The average income for all women was \$22, 592.02 (*SD* = \$22,148.34) with a range of \$1.87 to \$337,173.00.

---

Table 2

*Frequencies and Percentages of Demographic Variables by Country (N = 5885)*

	<u>United States</u>		<u>Sweden</u>		<u>Germany</u>		<u>Canada</u>	
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>
<b>Age</b>								
50-59	1341	67.2	1703	78.2	693	77.4	500	61.1
60-69	510	25.6	417	19.2	194	21.7	270	33.0
70 +	144	7.2	57	2.6	8	.9	48	5.9
<b>Marital Status</b>								
Married	1692	84.8	1896	87.1	843	94.2	672	82.2
Never Married	303	15.2	281	12.9	52	5.8	146	17.8
<b>Education Level</b>								
Low	287	14.4	515	23.7	173	19.3	262	32.0
Medium	956	47.9	951	43.7	492	55.0	374	45.7
High	752	37.7	685	31.5	225	25.1	182	22.2

Note: Frequencies not adding to 5885 and percentages not adding to 100 reflect missing data. The range was \$1.87 to \$337,173.00.

The average income for all women in 2000 was \$22,592.02 ( $SD = \$22,148.34$ ) with a range of \$1.87 to \$337,173.00. When examined by country, women in the United States had the highest average income ( $M = \$25,515.42$ ,  $SD = \$28,093.66$ ), followed by Sweden ( $M = \$21,999.31$ ,  $SD = \$15,440.54$ ) and Germany ( $M = \$21,746.22$ ,  $SD = \$16,208.14$ ), while women in Canada ( $M = \$17,965.05$ ,  $SD = \$25,301.42$ ) had the lowest average income (See Table 3).

Table 3

*Descriptive Statistics of Income for All Participants and by Country (N = 5885)*

	N	Mean	SD	Min	Max
All	5885	\$22,592.02	\$22,148.34	\$1.87	\$337,173.00
United States	1995	\$25,515.42	\$28,093.66	\$5.00	\$337,173.00
Sweden	2177	\$21,999.31	\$15,440.54	\$1.87	\$168,788.86
Germany	895	\$21,746.22	\$16,208.14	\$91.42	\$106,800.05
Canada	818	\$17,965.05	\$25,301.42	\$21.10	\$253,143.30

### *Education*

Pearson's Product Moment Correlations showed that for all women, education was positively correlated to income, [ $r(5854) = .278, p < .01$ ], indicating that women with high education levels, also had high incomes. As shown in Table 4, similar correlations were found for never married [ $r(780) = .269, p < .01$ ], and married women [ $r(5074) = .279, p < .01$ ]. This small to moderate positive relationship (Cohen & Cohen, 1975) was also seen for all women in the United States, [ $r(1995) = .320, p < .01$ ], Sweden, [ $r(2177) = .260, p < .01$ ], Germany, [ $r(895) = .310, p < .01$ ], and Canada, [ $r(818) = .225, p < .01$ ]. Fisher's z difference tests showed that the relationship between education and income level for all women, regardless of marital status, in the United States and Germany was significantly stronger than Canada,  $p < .05$ . The relationship



between education and income for the United States was also stronger than for Sweden,  $p < .05$ .

---

Table 4  
*Pearson's Product Moment Correlations for Education and Income by Country and Marital Status (N = 5885)*

---

	<u>All Countries</u>	<u>United States</u>	<u>Sweden</u>	<u>Germany</u>	<u>Canada</u>
All Women	.278**	.320**	.260**	.310**	.225**
Never Married	.269**	.405**	-.011	.355**	.283**
Married	.279**	.281**	.315**	.299**	.210**

---

Note: \*  $p < .05$ ; \*\*  $p < .01$ . The range was \$1.87 to \$337,173.00.

When examining the relationship between education level and income separately for never married and married women in each of the four countries, similar correlations were found, except in Sweden, where there was almost no relationship between education level and income for never married women [ $r(280) = -.011, p = .967$ ], but a moderate positive relationship for married women, [ $r(1896) = .315, p < .01$ ]. While the correlations between education and income for never married women were stronger in the United States, Germany, and Canada than for married women, the difference was only significantly different for the United States,  $p < .05$ .

Differences of income between education levels by country were also conducted using a two way Analysis of Variance (ANOVA). A main effect for country, [ $F(3, 5842) = 9.65, p < .001$ ], as well as a main effect for education level, [ $F(2, 5842) = 173.65, p < .001$ ], was found. These main effects, however, were qualified by a significant interaction between country and education level, [ $F(6, 5842) = 10.80, p < .001$ ]. Scheffé post hoc tests showed that regardless of marital status, women with high education levels in the United States ( $M = \$36,783.20$ ) had significantly greater incomes than any other group,  $p < .05$ , followed by high education women in Sweden ( $M = \$27,769.20$ ) and Germany ( $M = \$29,627.36$ ). The average income of women with high education in Canada ( $M = \$26,819.51$ ) was statistically similar to the average income of women with a medium level education in the other three countries. See Table 5 for other country/education level group differences.

Due to the small number of women in some of the cells, the three-way interaction between country, education, and marital status was not statistically sound. However, the average incomes for these groups are shown in Table 6.

Table 5

*Average Income for Low, Medium, and High Education Levels by Country*

	N	<i>Mean</i>		<i>SD</i>
United States				
Low	287	\$14,803.43	<sup>a</sup>	\$13,271.07
Medium	956	\$19,867.91	<sup>ab</sup>	\$20,497.61
High	752	\$36,783.20	<sup>c</sup>	\$35,813.86
Sweden				
Low	515	\$17,197.62	<sup>a</sup>	\$11,873.67
Medium	951	\$20,945.25	<sup>ab</sup>	\$13,755.86
High	685	\$27,769.20	<sup>d</sup>	\$17,915.93
Germany				
Low	173	\$14,772.69	<sup>a</sup>	\$11,258.06
Medium	492	\$20,693.03	<sup>ab</sup>	\$14,753.41
High	225	\$29,627.36	<sup>d</sup>	\$19,067.15
Canada				
Low	262	\$11,129.05	<sup>ae</sup>	\$12,409.45
Medium	374	\$18,445.05	<sup>abf</sup>	\$26,417.09
High	182	\$26,819.51	<sup>bg</sup>	\$32,900.14

Note: Means with different superscripts differed significantly from each other by Scheffé Post Hoc Test,  $p < .05$ . The range was \$1.87 to \$337,173.00.

Table 6

*Average Income for Low, Medium, and High Education Levels by Country and*

*Marital Status*

	<u>Never Married</u>			<u>Married</u>		
	N	Mean	SD	N	Mean	SD
United States						
Low	54	\$10,960.54	\$7,330.61	233	\$15,694.05	\$14,163.50
Medium	118	\$24,074.93	\$18,085.92	838	\$19,275.52	\$20,756.07
High	131	\$41,498.59	\$35,691.70	621	\$35,788.48	\$35,788.88
Sweden						
Low	42	\$19,832.36	\$10,587.05	473	\$16,963.67	\$11,963.30
Medium	128	\$13,231.16	\$12,580.21	823	\$22,145.01	\$13,547.33
High	110	\$17,023.25	\$15,345.26	575	\$29,824.94	\$17,646.91
Germany						
Low	5	\$13,853.76	\$16,826.06	168	\$14,800.04	\$11,123.46
Medium	27	\$33,681.89	\$20,053.41	465	\$19,938.84	\$14,050.20
High	19	\$41,260.28	\$18,830.34	206	\$28,554.42	\$18,772.82
Canada						
Low	30	\$15,945.92	\$13,742.55	232	\$10,506.17	\$12,119.47
Medium	77	\$20,047.36	\$15,132.92	297	\$18,029.64	\$28,631.48
High	39	\$31,485.51	\$26,793.69	143	\$25,546.97	\$34,350.81

*Marital Status*

Differences of income between marital status and country were conducted using a two way ANOVA. A main effect for country, [ $F(3, 5877) = 28.01, p < .001$ ], as well as a

main effect for marital status, [ $F(1, 5877) = 14.81, p < .001$ ], was found. These main effects, however, were qualified by a significant interaction between country and marital status, [ $F(3, 5877) = 20.81, p < .001$ ]. Scheffé post hoc tests showed that never married women in Germany ( $M = \$34,727.93$ ), had significantly greater incomes than any other group,  $p < .05$ , followed by never married ( $M = \$29,270.71$ ) and married ( $M = \$24,842.93$ ) women in the United States. The average income of married women in Canada ( $M = \$17,301.92$ ) was statistically similar to the average income of never married women in Sweden ( $M = \$15,655.71$ ) (See Table 7).

Table 7

*Average Income for Never Married and Married Women by Country*

	<u>Never Married</u>			<u>Married</u>		
	N	Mean	SD	N	Mean	SD
United States	303	\$29,270.71	\$28,633.47	1692	\$24,842.93	\$27,951.25
Sweden	281	\$15,655.71	\$13,666.04	1896	\$22,939.48	\$15,469.84
Germany	52	\$34,727.93	\$20,321.80	843	\$20,945.45	\$15,584.10
Canada	146	\$22,259.99	\$19,485.42	672	\$17,031.92	\$26,315.75

Note: For means that differed, Scheffé Post Hoc Test,  $p < .05$ . The range was \$1.87 to \$337,173.00.

## Age

Pearson's Product Moment Correlations showed that for all women, age was negatively correlated to income, [ $r(5885) = -.205, p < .01$ ], indicating that older women had lower incomes. As shown in Table 8, similar correlations were found for never married [ $r(782) = -.136, p < .01$ ], and married women [ $r(5103) = -.215, p < .01$ ]. This small negative relationship (Cohen & Cohen, 1975) was also seen for all women in the United States, [ $r(1995) = -.158, p < .01$ ], Sweden, [ $r(2177) = -.325, p < .01$ ], Germany, [ $r(895) = -.228, p < .01$ ], and Canada, [ $r(818) = -.213, p < .01$ ]. Difference tests showed that the relationship between age and income level for all women, regardless of marital status, in the United States was significantly weaker than Sweden,  $p < .05$ .

---

Table 8

*Pearson's Product Moment Correlations for Age and Income by Country and Marital Status (N = 5885)*

---

	<u>All Countries</u>	<u>United States</u>	<u>Sweden</u>	<u>Germany</u>	<u>Canada</u>
All Women	-.205**	-.158**	-.325**	-.228**	-.213**
Never Married	-.136**	-.232**	-.005	-.374**	-.291**
Married	-.215**	-.143**	-.381**	-.242**	-.195**

---

Note: \*  $p < .05$ ; \*\*  $p < .01$ . The range was \$1.87 to \$337,173.00.

When examining the relationship between age and income separately for never married and married women in each of the four countries, similar correlations were found, except in Sweden, where there was almost no relationship between age and income for never married women, [ $r(939) = -.005, p = .934$ ], but a moderate negative relationship for married women, [ $r(1896) = -.381, p < .01$ ]. The correlations between age and income for never married women were stronger in the United States, Germany, and Canada than for married women,  $p < .05$ .

Differences of income between age and country were also conducted using a two way ANOVA. A main effect for country, [ $F(3, 5877) = 18.54, p < .001$ ], as well as a main effect for age group, [ $F(2, 5873) = 96.74, p < .001$ ], was found. The interaction between country and age, however was not significant, [ $F(6, 5873) = 1.33, p = .244$ ] (See Table 9).

Due to the small number of women in some of the cells, the three-way interaction between country, age, and marital status was not statistically sound. However, the average incomes for these groups are shown in Table 10.

---

Table 9

*Average Income for Age Groups by Country*

---

	<u>N</u>	<u>Mean</u>	<u>SD</u>
United States			
50 - 59	1341	\$28,391.21	\$30,404.68
60 - 69	510	\$21,150.29	\$21,518.46
70 +	144	\$14,194.49	\$20,494.48
Sweden			
50 - 59	1703	\$24,447.82	\$15,287.38
60 - 69	417	\$14,738.75	\$12,505.97
70 +	57	\$1,961.49	\$3,954.13
Germany			
50 - 59	693	\$23,664.11	\$16,117.03
60 - 69	194	\$15,617.36	\$14,886.78
70 +	8	\$4,233.83	\$2,461.52
Canada			
50 - 59	500	\$22,094.98	\$29,468.17
60 - 69	270	\$12,543.41	\$15,431.36
70 +	48	\$5,441.70	\$5,916.34

---

Note: For means that differed, Scheffé Post Hoc Test,  $p < .05$ . The range was \$1.87 to \$337,173.00.



Table 10

*Average Income for Age Groups by Country and Marital Status*

	<u>Never Married</u>			<u>Married</u>		
	N	Mean	SD	N	Mean	SD
<b>United States</b>						
50 - 59	216	\$33,459.73	\$31,250.04	1125	\$27,418.06	\$30,156.47
60 - 69	73	\$19,936.23	\$17,481.66	437	\$21,353.10	\$22,131.80
70 +	14	\$13,312.86	\$12,155.93	130	\$14,289.43	\$21,227.88
<b>Sweden</b>						
50 - 59	260	\$15,561.32	\$13,701.34	1443	\$26,048.99	\$15,010.66
60 - 69	19	\$18,515.83	\$13,058.09	398	\$14,558.44	\$12,467.48
70 +	2	\$754.98	\$857.45	55	\$2,005.36	\$4,018.05
<b>Germany</b>						
50 - 59	34	\$38,407.82	\$17,466.17	659	\$22,903.44	\$15,686.60
60 - 69	14	\$34,503.66	\$22,858.51	180	\$14,148.43	\$13,074.17
70 +	4	\$4,233.83	\$2,658.74	4	\$4,233.83	\$2,658.74
<b>Canada</b>						
50 - 59	107	\$25,498.86	\$20,615.38	393	\$21,168.22	\$31,407.93
60 - 69	34	\$14,697.20	\$12,570.59	236	\$12,233.11	\$15,799.41
70 +	5	\$4,375.16	\$5,554.02	43	\$5,565.72	\$6,006.75

*Multiple Regressions*

Multiple regression analyses were conducted to predict wealth, which is considered the sum of one's assets, such as stock, real estate, and accumulated savings (Smeeding & Sandström, 2005) from marital status, education, and age for each country.

Analyses revealed a significant regression model for the United States, [ $F(3, 1991) = 85.54, p < .001$ ], which accounted for 11.4% of the variance, Sweden, [ $F(3, 2147) = 164.15, p < .001$ ], which accounted for 18.7% of the variance, Germany, [ $F(3, 886) = 59.88, p < .001$ ], which accounted for 16.9% of the variance, and Canada, [ $F(3, 814) = 25.48, p < .001$ ], which accounted for only 8.6% of the variance. While the models were significant, the low percentage of variance accounted for in each country indicates that other factors not examined in the present study may play a role in predicting wealth.

As shown in Table 11, for the United States and Germany, wealth was significantly predicted by marital status, education level, and age. Never being married (compared to being married) and increased education level predicted an increase in income, while increased age predicted a decreased income. For Sweden, wealth was significantly predicted by marital status, education level, and age. Never being married (compared to being married) and increased age predicted a decrease in income, while increased education level predicted an increased income. For Canada, wealth was significantly predicted by education level, and age. An increased education level predicted an increase in income, while increased age predicted a decreased income. Marital Status did not significantly predict income in Canada.

Table 11

*Multiple Regression Analyses of Income from Age, Marital Status, and Education Level  
By Country*

Predictor	<i>B</i>	SE	Beta	<i>t</i>	<i>p</i>
United States					
$R^2 = .114, F(3, 1991) = 85.54, p < .001$					
Marital Status	3617.955	1652.485	0.046	2.189	0.029
Education	12126.446	868.299	0.295	13.966	0.000
Age	-6474.812	957.473	-0.143	-6.762	0.000
Sweden					
$R^2 = .187, F(3, 2147) = 164.15, p < .001$					
Marital Status	-10146.832	898.039	-0.222	-11.299	0.000
Education	5001.566	406.812	0.242	12.295	0.000
Age	-9945.752	668.394	-0.294	-14.880	0.000
Germany					
$R^2 = .169, F(3, 886) = 59.88, p < .001$					
Marital Status	13673.020	2155.718	0.196	6.343	0.000
Education	6548.545	752.722	0.270	8.700	0.000
Age	-7724.215	1136.467	-0.211	-6.797	0.000
Canada					
$R^2 = .086, F(3, 814) = 25.48, p < .001$					
Marital Status	2563.549	2235.661	0.039	1.147	0.252
Education	6772.613	1176.800	0.196	5.755	0.000
Age	-7593.301	1424.847	-0.181	-5.329	0.000

### *Questions Summary*

*Question 1.* Does education of never married women correlate with wealth?

Pearson's Product Moment Correlations showed that for all never married women; education was significantly positively correlated to wealth. When examined by country, this significant relationship was also true for the United States, Germany, and Canada, but not for Sweden. Similar patterns were found using ANOVA.

*Question 2.* Does wealth decline with age of three cohorts (young 50-59, middle, 60-69, and old 70+) of never married women compared to married women?

Pearson's Product Moment Correlations and ANOVAs showed that for all countries combined, wealth does decline with age for both married and never married women and that the relationship is stronger for never married women than for married women. For the United States, Germany, and Canada wealth does decline with age for both married and never married women and the relationship is stronger for never married women than for married women. For Sweden, wealth does decline with age for married but not for never married women.

*Question 3.* Is being married or never married a significant predictor of women's wealth in four counties (Sweden, Canada, Germany, and United States)?

Multiple regression analyses showed that never being married was a significant positive predictor on income for United States and Germany, such that never being married increased women's wealth compared to being married in the United States and Germany. In contrast, never being married was a significant negative predictor on income

for Sweden, such that never being married decreased women's wealth compared to married women in Sweden. Marital Status was not a significant predictor of women's wealth in Canada.

*Question 4.* What are the predictors of overall wealth among never married women by age (young 50-59, middle, 60-69, and old 70+), marital status (never married, or married) for each of the four countries (Sweden, Canada, Germany, and United States) and education?

Multiple regression analyses showed that for the United States and Germany, wealth was significantly predicted by marital status, education level, and age. Never being married (compared to being married) and increased education level predicted an increase in income, while increased age predicted a decreased income. For Sweden, wealth was significantly predicted by marital status, education level, and age. Never being married (compared to being married) and increased age predicted a decrease in income, while increased education level predicted an increased income. For Canada, wealth was significantly predicted by, education level, and age. An increased education level predicted an increase in income, while increased age predicted a decreased income. Marital Status did not significantly predict income in Canada.

Multiple regression analyses showed that education level and age were significant positive predictors of income, and marital status was a significant predictor for three of the four countries, although in different directions. For the United States and Germany, wealth was significantly predicted by marital status, education level, and age. Never

being married (compared to being married) and increased education level predicted an increase in income, while increased age predicted a decreased income. For Sweden, wealth was significantly predicted by marital status, education level, and age. However, never being married (compared to being married) and increased age predicted a decrease in income, while increased education level predicted an increased income. For Canada, wealth was significantly predicted by education level, and age, but not marital status. An increased education level predicted an increase in income, while increased age predicted a decreased income.

The goal of the study was to address four research questions regarding inequality in the wealth of never married women by age, education, marital status, and country using quantitative analysis. Results showed that education does correlate with wealth for never married women. For never married women across all four countries, education was significantly correlated to income (although weak to moderate in strength), such that as education increases, income also increases. In all four countries, never married women with more education had more income than those with less education. A weak to moderate correlation between education and income may indicate that there are other contributing factors predicting wealth. A pure measurement of wealth and all of the complex factors that go into understanding the impact of wealth is hard to construct. This study shows the correlations between wealth and education and why the significance is low to moderate in importance to increasing or decreasing the wealth of never married women. While the relationship was significant, it was small to moderate in size, which

implies there may be other factors or variable that should be considered in future research.

In examining the relationship between education and income for never married women, the relationship was also examined for married women. The results of these analyses revealed the same pattern as found for never married woman. The relationship was also significant and in the same direction for married women (as education increased so did income), which was also true for never married women. The correlations, however, were stronger for never married women, implying that while education is an important factor for income, it is stronger (or possibly more important) for never married women than for married women.

When analyzing the correlation between education and wealth for each country separately, the results were the same for Canada, Germany, and the United States for never married and married women. Education was significantly, although low to moderate, correlated to income. One difference was found in the analysis of data for Sweden, which showed that for married women, education was significantly (although moderate in size) correlated to income, such that as education increases, income also increases. There was no relationship between education and income for never married women.

Money spent on education differs between countries. The United States and Canada spend less money per person on education than Germany and Sweden (Williamson & Smeeding, 2004). More research is needed to understand the impact of

the amount of money the countries spend on education and the correlations between wealth and education.

The study also asked if being married or never married is a significant predictor of women's wealth in the four countries. Results found that being never married was a significant positive predictor on income for the United States and Germany, such that never being married increased women's wealth compared to being married. In contrast, never being married was a significant negative predictor on income for Sweden, such that never being married decreased women's wealth compared to married women in Sweden. Marital status was not a significant predictor of women's wealth in Canada. These results may seem counter intuitive and indicate that more research is needed in this area to understand the findings of why never married women in the United States and Germany have more wealth, but less wealth in Sweden. Never being married decreased women's wealth compared to married women in Sweden. There could be a variety of possible reasons for these results. The fact that each country has a different welfare system and national health care may be a partial explanation of these findings.

The current study also examined the differences between three age cohorts and income level, specifically asking does wealth decline with age of three cohorts: 1) 50- to-59 year olds, 2) 60-to-69 year olds, and 3) 70+ year olds of never married women compared to married women. For all countries combined, results indicated that wealth does decline with age for both married and never married women. The relationship is stronger for the never married women than for the married women, implying that the



impact of age on income is greater for never married women than it is for married women. The literature suggested that to help prevent poverty, support systems such as friends, family, and access to resources are necessary (Payne, 1996). The outcomes of this study imply that never married women have increased wealth compared to married women. To decrease poverty and increase wealth, the never married woman may have developed support systems or other resources over time that has sustained them in society.

When examining the four countries individually, for Canada, Germany, and the United States, wealth declined as age increased for both married and never married women. The relationship was stronger in the area of the never married women than for the married women. For Sweden, however, wealth does decline with age for married, but not for never married women. Results of this analysis imply that in Sweden being married might decrease wealth as a person ages. Gornick (2004) reported that in Sweden, women age 55 to 74 were more likely to be working for pay than other countries. The never married women may have always worked since she was without a husband to support her. The never married woman may continue to work as she has done throughout her life, therefore her income would not decrease.

Finally, the present study asked what are the predictors of overall wealth among never married women from age, marital status, and education, for each of the four countries. Connections between inequality of wealth and never married women could be drawn based upon Esping-Anderson's (1990) three theoretical typologies for welfare

systems, which are the liberal (United States and Canada), conservative (Germany), and social democratic (Sweden) systems. The functions of these systems differ in their attempt to help take care of the well being of women in their society. The main goal is to prevent poverty and social exclusion. The three main foundations are the market, families and the state or government. In turn, these systems differences could influence the never married women's inequality of wealth within their specific country.

For the United States and Germany, wealth was significantly predicted by marital status, education level, and age. Never being married (compared to being married) and increased education level predicted an increase in income, while increased age predicted a decreased income. These results may point to differences in government involvement that relate to the inequality of wealth with the never married women between marital status, education, and age. The United States is considered a liberal welfare system, which incorporates the idea of free market with little or no government involvement, but assumes that everyone will work (Esping-Anderson, 1990). In the United States, the idea is that freedom in competition of labor leads to more competition. The problem is that this competition may cause winners, losers, and insecurities that may lead to poverty. This may not be entirely the fault of the system, but related to the individual and his or her approach to personal responsibility as well. According to the findings of this study, the never married women in the United States have the greatest potential for increased wealth with increased education than did Canada, Germany or Sweden.

A secondary influence that may have an impact on the effect of wealth of never married women in Germany, is that Germany has a conservative social policy and welfare approach (Esping-Anderson, 1990). The approach is based on the stratification of class and hierarchy of society. These policies are extensions of the feudal societies where the ruling class is obligated to provide for its subjects. These policies emphasize government protection of society as a whole. These policies may have an impact on the well being and wealth of never married women in Germany.

For Sweden, wealth was significantly predicted by marital status, education level, and age. Never being married (compared to being married) and increased age predicted a decrease in income, while increased education level predicted an increased income. In Sweden, being never married predicts that wealth does decline for married women, but not for the never married women. The results point to a strong social policy for the never married women. In relation to countries with similar findings, the type of welfare system may have some impact on the inequalities of never married women. For example, Sweden has a social democratic approach to social policy and welfare, which advocates full employment and promotes equality with a safety net to help those that struggle with wealth issues (Esping-Anderson, 1990). It encourages individualism and discourages reliance on family as the first choice, which is different from the conservative approach as seen in the United States that assumes the family is an important variable (Sullivan, Warren, & Westbrook, 2000). In Sweden, everyone is dependent and has to pay taxes.

The government must convince the population to pay higher taxes in order to provide for those that are not working (Esping-Anderson).

For Canada, wealth was significantly predicted by education level and age. An increased education level predicted an increase in income, while increased age predicted a decreased income. Marital status did not significantly predict income in Canada.

In studies of inequality of economics, Card and Freeman (1994) found major themes in the four countries of this research study, Canada, Germany, United States, and Sweden. They found that Canada and United States are more comparable with each other than other countries in the industrialized world because they are close economically and socially. Both have highly educated and skilled work forces, with one major difference being the roles that unions play in each country. Sweden has highly centralized wage-setting systems that reflect their economic systems. Germany invests in training those without a university degree. The impact of public redistribution in Germany has shown that the economy has remained high and family stable (Brandolini & Smeeding, 2005). The inequality of disposable incomes increased in the United States and Sweden, but changed little in Canada and Germany. Some patterns depend on the definitions of income and whether taxes and benefits are included. Inequality between countries could be the results of government policies and social spending patterns.

Education was an important factor of the inequality wealth indicating that the more education one has the more wealth one has also. While the relationship was significant, it was small to moderate in size, which implies there may be other factors

affecting the wealth of never married women and should be considered in future research. While the models were significant, the low percentage of variance accounted for in each country indicates that other factors not examined in the present study may play a role in predicting wealth.

## **Conclusions and Implications**

Results of the study led to implications for use of these quantitative findings on the inequality of wealth in never married women using variables of age, education, marital status, and country. Implications are presented for family sciences professionals, health care agencies and providers, and social program planners and policy makers. It is hoped that discovering factors that contribute to wealth inequality which affect older never married women will initiate suggestions for policies to help protect the well-being of individuals as this population ages. Other factors of interest in future research regarding women's wealth could include family history, family wealth, urban or rural environment, race, welfare systems, health, and/or disabilities.

The aging of a growing population is an indisputable fact and important to society (Moody, 2002). The economic and social outlook for an aging society is not be predicted, but to be constructed and will shape society of tomorrow (Steckenrider & Parrott, 1998). The older people of every society are important to the success of their country, and they play a vital role in continuation of valued traditions (Chawla, 1993). Taking responsibility for one's life can seem overwhelming and women must address two factors in their plans to make dreams more attainable, money and time. Whether women intend

to marry eventually or remain on their own, they need to start viewing themselves as independent economic entities (Anderson & Steward, 1994). Policies should be guided in recognizing the impact that legislation and reform have on individuals decisions to marry or to stay single.

Inequality continues to increase in the United States and other industrialized countries (Brandolini & Smeeding, 2005). Longitudinal research is needed to understand long-term patterns that are emerging from the aging population and never married women. There is no single measure readily available for the examination of international statistics. Additional comparable research that is needed to expand the findings and measures over time will enrich the research from this study.

The conclusion of the findings of this study reveals relationships between inequality of wealth and the never married women. In all countries, the more education a woman had the more wealth she appeared to have. Never being married in United States and Germany increased the wealth compared to married women. In Sweden, the never married had decreased wealth compared to married women. For Canada, there was no significant difference in the wealth of the never married and married. Country was important in determining wealth. In the United States, Germany and Canada the wealth of higher educated women was greater than in Sweden. In the United States, the more education never married and married women had resulted in a more wealth than for all the other. Age was important in determining wealth. As never married women aged the

less wealth they appeared to have in all countries Canada, Germany, Sweden, and the United States.

#### REFERENCES

- Adair, V. C. (2001). Poverty and the (broken) promise of higher education. *Harvard Educational Review, 71*(2), 23-25.
- Adams, R. G., Blieszner, R., & DeVries, B. (2000). *Journal of Aging Studies, 14*, 26-39.
- Allen, K. R. (1988). Integrating a feminist perspective into family studies courses. *Family Relations, 37*, 29-35.
- Allen, K. R. (1989). *Single women/family ties: Life histories of older women*. Newbury Park, CA: Sage.
- Allen, K. R., & Baber, K. M. (1992). Starting a revolution in family life education: A feminist vision. *Family Relations, 41*, 378-384.
- Allen, K. R., & Pickett, R. S. (1987). Forgotten streams in the family life course: Utilization of qualitative retrospective interview in the analysis of lifelong single women's family careers. *Journal of Marriage and the Family, 49*, 517-543.
- Anderson, C. M., & Stewart, S. (1994). *Flying solo: Single women in midlife*. New York: W. W. Norton.
- Atchley, R. C. (1997). Retirement income security: Past, present, and future. *Generations, 21*(2), 9-13.
- Atchley, R. C., & Barusch, A. S. (2004). *Social forces and aging: An introduction to social gerontology* (10<sup>th</sup> Ed.). Belmont, CA: Wadsworth.

- Atkinson, A. B. (2004). The Luxembourg Income Study (LIS): Past, present and future. *Socio-Economic Review*, 2(2), 165-190.
- Becker, G. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education*. Chicago: University of Chicago Press.
- Bergmark, A., & Palme, J. (2003). Welfare and unemployment crisis: Sweden in the 1990s. *International Journal of Social Welfare*, 12(2), 108-113.
- Blakely, E. J., (1992). Villains and victims: Poverty and public policy. *Journal of American Planning Association*, 58(2), 248-250.
- Brandolini, A., & Smeeding, T.M. (2005). Inequality patterns in western democracies: Cross-country differences and time changes. Retrieved November 4, 2005 from [http://www.maxwell.syr.edu/moynihan/programs/euc/May6-7\\_Conference\\_Papers/BrandoliniSmeeding.pdf#search='smeeding%20and%20brandolini'](http://www.maxwell.syr.edu/moynihan/programs/euc/May6-7_Conference_Papers/BrandoliniSmeeding.pdf#search='smeeding%20and%20brandolini')
- Bureau of Labor Statistics (2003). *National Occupational Employment and Wage Estimates All Occupations*. Retrieved June 15, 2005, from [http://www.bls.gov/oes/2003/may/oes\\_00A1.htm](http://www.bls.gov/oes/2003/may/oes_00A1.htm).
- Card, D., & Freeman, R. B. (1993). *Small differences that matter: Labor market and income maintenance in Canada and the United States*. University of Chicago Press: Chicago.
- Cavanaugh, J. C., & Blanchard-Fields, F. (2002). *Adult development and aging*. Belmont, CA: Wadsworth.



- Chawla, S. (1993). Demographic aging and development. *Generations*, 17(4), 20-24.
- Chittenden, M. (2001). Women breaking through male-dominated fields: Equal pay achieved for large numbers of women entering traditional male white-collar occupations. Retrieve on June 3, 2005 from <http://www.epf.org/news>.
- Christopher, K., England, P., Smeeding, T. M., & Phillips, K.R. (2002). The gender gap in poverty in modern nations: Single motherhood, the market, and the state. *Sociological Perspectives*, 45, 219-242.
- Clark, R. L., Burkhauser, R. V., Moon, M., Quinn, J. F., & Smeeding, T. M. (2004). *The economics of an aging society*. Malden, MA: Blackwell.
- Cooper, S. E. (2004). *The red hat society: Fun and friendship after fifty*. New York: Warner Books.
- Creswell, J.W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches (2<sup>nd</sup>)*. Thousand Oaks, CA: Sage.
- Esping-Anderson, G. (1990). *The three worlds of welfare capitalism*. Oxford, UK: Blackwell Publishing Ltd.
- Francese, P. (2002). Top trends for the 2003. *American Demographic*, 24(11), 48-52.
- Förster, M. F., Jesuit, D., & Smeeding (2002). Regional poverty and income inequality in Central and Eastern Europe: Evidence from the Luxembourg Income Study. Retrieved June 16, 2005 from <http://www.wider.unu.edu/conference/conference-2002-2/papers/foster-jesuit-smeeding.pdf>.

- Förster, M. F., & Vleminckx, K. (2004). International comparisons of income inequality and poverty: Findings from the Luxembourg Income Study. *Socio-Economic Review*, 2, 191-212.
- Goode, W. J. (1963). *World revolution and family patterns*. London: Free Press of Glencoe.
- Gornick, J. C. (1999). Gender equality in the labor market: Women's employment and earnings. Luxembourg Income Study Working Paper No. 206. Retrieved Jun 18, 2005 from <http://www.lisproject.org/publications/liswps/206.pdf>.
- Gornick, J. C. (2004). Women's economic outcomes, gender inequality, and public policy: Luxembourg Income Study. *Socio-Economic Review*, 2, 213-238.
- Gullette, M. M. (2001). The contrived war between "The Xers" and "The Boomers". *Review of Education, Pedagogy & Cultural Studies*, 23(2), 137-168.
- Harris, J. R. (1998). *The nurture assumption: Why children turn out the way they do*. New York: The Free Press.
- Henslin, J. M. (2005). *Essentials of sociology: A down-to-earth approach (6<sup>th</sup>)*. Boston: Allyn and Bacon.
- Kickett-Tucker, C., & Johnson, D. (2004). The challenges of Nyoongal women are changing roles. *Family Relations*, 32(8), 19-22.
- Kuhn, T. S. (1996). *The structure of scientific revolution (3<sup>rd</sup>)*. Chicago: University of Chicago Press.

- Li, R. M., & Newcomer, S. F. (1996). The exclusion of never married women forms Chinas fertility surveys. *Studies in Family Planning*, 27(3), 148-154.
- Luxembourg Income Study, *Member Countries, and Organizations, Introduction*. Retrieved August 16, 2005 from <http://www.lisproject.org/introduction/membercountries.htm>.
- Luxembourg Income Study, 2005. *Short History*. Retrieved June 16, 2005 from <http://www.lisproject.org/workshop.htm>.
- Moody, H. R., (2002). *Aging: Concepts and controversies* (4<sup>th</sup>). Thousand Oaks, CA: Sage.
- Moynihan, D. P., Smeeding, T. M., & Rainwater (2004). *Future of the family*. New York: Russell Sage Foundation.
- Payne, R. K. (1996). *A framework for understanding poverty*. Highland, TX: aha! Process, Inc.
- Sherif-Trask, B. (2004). Why the study of non-western families matter. *National Council on Family Relations*, 49, F2-F4.
- Shieler, D. K. (2004). *The working poor: Invisible in America*. New York: Random House.
- Simon, B. L. (1987). *Never married women*. Philadelphia: Temple University Press.
- Smeeding, T. M. (2000). *Sociology of poverty*. Luxembourg Income Study Working Paper N0 315. Retrieved June 16, 2005 from <http://www.lisproject.org/publications/liswps/315.pdf>

- Smeeding, T., & Sandström, S. (2005). *Poverty and income maintenance in old age: A cross-national view of low-income older women*. Working paper # 398. Maxwell school of citizenship and public affairs. Syracuse University. Syracuse, NY 13244-1020.
- Smith, B. (2001). How should we value child-rearing work? *Canadian Dimension*, 33(5), 7-8.
- Spence, A. P. (1999). *Biology of human aging* (2<sup>nd</sup>). Upper Saddle River, N. J: Prentice Hall.
- Steckenrider, F., & Parrott, T. (1998). *New direction in old-age policies*. Albany: State University of New York Press.
- Strong, B., DeVaulth, C., & Cohen, T. F. (2005). *The marriage and family experience: Intimate relationships in a changing society*. Belmont, CA: Thomson Wadsworth.
- Sullivan, T. A., Warren, E., & Westbrook, J.L. (2000). *The fragile middle class: Americans in debt*. New Haven: Yale University Press.
- Texas Archival Resources Online. Humphries family: An inventory of their papers 1876-1955. Retrieved September 1, 2005 from <http://www.lib.utexas.edu/taro/ttusw/00017.html>.
- Trafford, A. (2004). *My time: Making the most of the rest of your life*. New York: Basic Books.
- U.S. Bureau of the Census (2000). *Population Estimates of the U.S.* Retrieved May 10, 2005, from <http://www.census.gov/popest/estimates.php>.

- U.S. Census Bureau (2000). *Census bureau estimates number of children and adults in the States and Puerto Rico*. Retrieved May 10, 2005, from <http://www.census.gov/PressRelease/www/releases/archives/population/004083.html>.
- Vicinus, M. (1985). *Independent women: Work and community for single women, 1850-1920*. Chicago: The University of Chicago Press.
- Williamson, J., & Smeeding, T. M. (2004). *Sliding into poverty? Cross-national patterns of income source change and income decay in old age*. Working paper # 388, Maxwell School of Citizenship and Public Affairs, Syracuse University, Syracuse, New York 13244-1020.
- Wolff, E. (2003). The wealth divide: The growing gap in the United States between the rich and the rest. *Multinational Monitor*, 24(5), 11-16.
- Wong, F. L. (2002). Preparing to meet the needs of an aging American public. *Nation's Health*, 32(8), 2-5.
- Zhan, M., & Pandey, S. (2004). Economic well-being of single mothers: Work first or postsecondary education? *Journal of Sociology & Social Welfare*, 31(3), 87-113.
- Zimmerman, S. L. (1995). *Understanding family policy: Theories & applications* (2<sup>nd</sup>). Thousand Oaks, CA: Sage.
- Zopf, P. E. (1989). *American women in poverty*. Westport, CT: Greenwood Press.