IMPACT OF WOMEN HEADS-OF-STATE ON HUMAN DEVELOPMENT

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ABSTRACT

This study explores the relationship between women heads-of-state and their impact on Human Development in their country. Mainly, the intent of this paper is to determine whether women heads-of-state do a better job as compared to their male counterparts in improving health, education and economic status of their citizenry. A thorough review of Human Development Index (HDI) data shows that although women heads-of-state have a higher and positive impact on HDI as compared to their male counterparts, this difference in their performance is not statistically significant. The source of the data used in this study is Human Development Reports available at http://hdr.undp.org/statistcs/. The HDI data used in this study is from Human Development Reports 1998, 2002, and 2008.

JEL: E2, I1, I2

KEYWORDS: Human Development Index (HDI), Life Expectancy, Adult Literacy, Gross Enrollment, Education Index, Gross Domestic Product (GDP)

INTRODUCTION

In the past few years, more and more women have been elected presidents or prime ministers. Notable among them has been Angela Merkel of Germany, Michele Bachelet of Chile, Ellen Johnson-Sirleaf of Liberia, and Cristina Fernandez de Kirchner of Argentina. In modern times, more specifically since 1917, women have been presidents or prime ministers in different parts of the world (Worldwide Guide to Women in Leadership, 2009). The more prominent among them are Margaret Thatcher of Britain, Indira Gandhi of India, and Mary Robinson of Ireland. Yet, arguably, the strongest country in the world--United States--still does not have a women president. However, when Hillary R. Clinton, a serving Senator and wife of a former US president ran for the Democratic Party nomination in 2008, there was a succinct and real possibility of a woman becoming president of United States. Because of her candidacy, there was great excitement in the United States and throughout the world. In the same election, the Republican Party vice presidential candidate was also a female--Sarah Palin.

Although, the Palin candidacy did not generate as much excitement as Clinton's because she was a vice presidential candidate and her chances of winning were not as high as Clinton's prospect of securing the Democratic Party nomination. Regardless, in the 2008 US presidential election there was a strong possibility of electing a women leader as the President because a women president would represent and focus on issues that are important to women and families. Some thought that Ms. Clinton's candidacy focused on hopes, dreams, desires and frustrations of women across America and thus Ms. Clinton as President was a vehicle for achieving gender equity, fair treatment, and collapse of the glass ceiling for women (Lowen, 2008). Others stated that since women play a critical role in families, nations and economies, who would be better to focus on these issues than a woman leader (Powell, 2009). Furthermore, a group of prominent women rights leaders urged Barack Obama--the winner in 2008 election--to ensure equal female representation in decision-making and in his administration (Basch, el al., 2009). The women rights leaders' claimed major economic, security, governance and environmental issues could not be solved without equal participation of women at all levels of society. Along the same lines, many have also claimed that women participation in political decision-making improves quality of governance and reduces corruption (Women rights activists discuss human development, call for strengthening a women's role in society, UNDP, 2009).

An article in the International Herald Tribune (August 22-23, 2009, p. 4) concluded that when women are in charge of a family's money & land they spend it on nutrition, health, and educational needs of the family. Thus, it is logical that a women leader will improve employment opportunity, education, and health of women and others in the society. This is because women leaders as mothers (if they are) are more aware of children and family issues and thus more likely to focus on issues or programs that provide more education, economic betterment, healthcare and thus improved and healthy life for their citizenry as compared to their male counterparts. Others have argued that women have qualities of nurturing and cooperating, and also that women handle matters more humanely whereas men are tough and impatient (Liswood, p. xi, 6). Overall, it is argued that women and by extension women leaders have different points of views, values, experiences, priorities, interests and conditions of life (Liswood, p. 131), and thus women leaders are likely to focus on matters that improve the health, educational, social and economic life of the society. This study explores whether female leaders as heads-of-state do a better job as compared to their male counterparts in Human Development.

Human Development Index

In 1990, Huq, Jolly, Ranis and Desai created The Human Development Index for the United Nations Development Programme (UNDP) to gauge human development. Mainly, the HDI sheds light on the human development of a country. HDI classifies countries as developed, semi-developed or underdeveloped. Human development is widely accepted as key to national success, and key to raised standard of living (Liswood, 2009, p. 107). The great thing about the HDI is that in a single index/number, one can assess a country's social and economic development. HDI is composed of three indicators: life expectancy index, education index and GDP index. HDI in essence measures the (i) health, (ii) knowledge/education attainment, and (iii) standard of living of a nation.

Life Expectancy Index consists of life expectancy at birth measured by the number of years a newborn would live if prevailing patterns of age-specific mortality rates (probability of dying, expressed per 1000 live births) at the time of birth were to stay constant throughout the newborn's life (Human Development Report, 2008).

Education Index is composed of Adult Literacy Rate and Gross Enrolment Ratio (GER). Adult Literacy Rate is the proportion of the population that is 15 years old or older which is literate, expressed as a percentage of the corresponding population, total or for a given gender, in a country at a specific point in time. The UNDP defines a person being literate if the person can, with understanding, both read and write a short simple statement on her everyday life. GER is the total number of students enrolled in a given level of education, regardless of age, expressed as a percentage of the population in the theoretical age group for the same level of education. Furthermore, the education level is composed of primary, secondary, post-secondary and tertiary levels. Primary education is one having sound basic education in reading, writing and mathematics along with an elementary understanding of other subjects. Secondary level education is more subject focused, requiring more specialized teachers for each subject area. Post-secondary education is between upper secondary and tertiary education.

Tertiary education is substantially more advanced than upper secondary or post-secondary education. Tertiary education has two stages. The first stage in the Tertiary education is programmes of theoretical nature, which lead to practical, technical, or occupationally specific jobs, and the second stage of tertiary education composed of advanced study and original research that leads to a doctorate degree (Human Development Report, 2008).

The *GDP Index* is based on GDP per capita. The GDP per capita is GDP (value of all goods and services) divided by midyear population. The GDP consists of consumption, gross investment, government

spending, and net of exports. The GDP measures the market value of all goods and services produced in a country during a one-year period (Human Development Report, 2008).

LITERATURE REVIEW

There have been many studies analyzing effect of female representatives on governance and law making. Most of the available literature has argued for women representation in leadership roles because they represent more than half of world population with the understanding that basic needs--food, education, health--of a family unit is delivered by women. According to O'Connor (n.d.), male legislatures may talk and argue about women's issues, but more significantly, "the presence of women in legislative bodies makes a significant difference not only in what gets discussed, but also in what kinds of legislation are advanced." She goes on to state that elected women representatives place, champion and support women's issues much more than their male counterparts. The O'Connor article references numerous studies that essentially conclude that elected women leaders work for issues that matter to women. Moreover, Carroll (2000) refers to many studies that conclude that women representatives in the U.S. are more likely to support women's issues such as education, healthcare, and welfare of family and children.

Internationally, Curtin (2008) has argued whether women's presence as political leaders in New Zealand has led to something better than just a symbolic representation. She concludes that women leaders have not vigorously advanced women's issues, at least for strategic purposes. In Africa, Nzewgwu (2006) argues that although portrait of women from Africa is one of ignorant, oppressed and passive, its female leaders have made "audacious strides." He states that Rwanda has the highest ratio in the world of women in legislature. Onofre (2009) provides a good summary of prominent female leaders in 20th century. This study specifically analyzes whether there is a correlation between HDI and a female ruler in a country's highest position as either the President or Prime Minister.

DATA AND METHODOLOGY

The data used for this research paper came directly from the Human Development Reports prepared by the UNDP. More specifically, Human Development Reports from 2008, 2002 and 1998 were part of this study. Even though the 2008 Report had the most current data, this study uses data from 2002 and 1998 reports because the 2008 report provides HDI data beginning in 1980. In modern history, there have been approximately 100 women elected or appointed as heads of states mostly as President or Prime Minister (Worldwide Guide to Women in Leadership, 2009). The first acting head of a state was Evheniya Bosch of Ukraine in 1918 and the most recent one being Johanna Sigurdardsottir of Iceland.

This study analyzed HDI data for thirty-one women leaders from a pool of approximately hundred. Three criterions were used to achieve meaningful results. First, only leaders who were in power for a year or more were part of the analysis. The terms of (i) Khaleda Zia & Sheikh Hasina Wajed of Bangladesh from 1991 to 2003, (ii) Jenny Shipley & Helen Clark of New Zealand from 1997 to 2005, and (iii) Mary Robinson & Mary McAleese of Ireland from 1991 to 2001 were combined since a female followed another female leader. Second, there had to be existing HDI data for the country during the female leader’s term and for the male predecessor for the same duration. Third, a woman leader assuming office after 2006 was not part for this study, since HDI Report of 2008 contained data for the year ending 2006. Moreover, the duration of terms for some of the leaders was shortened because HDI data is only available until 2006 and the duration of terms for male and female leaders was equalized for an effective comparison.

The data is analyzed as follows. The first step determines the beginning and ending year of a woman leader's and the male predecessor's rein. The start and end year was increased by one because logically any new policy or program would take at least a year to be implemented and to have any measurable

impact on the people. Arguably, it may take more than a year for the full impact of any new program/policy implemented. Therefore, the HDI used in this study was for one year after the actual beginning and one year after the actual ending year of that leader's term. For example, if a leader started her term in 1975 and ended in 1976, then the HDI data used was for year 1976 (1975+1) and 1977 (1976+1). The second group of HDI data used was for the same duration in the prior years for the male predecessor. Thus, for the male predecessor in above example, the start period for the HDI would be 1975 and the end period would be 1976.

The second step entails calculation of the percent change in HDI from the start year to end year for the female leader followed by the male predecessor. Percent change equals the difference in the HDIs for the start and end years divided by start year HDI and then multiplying that number by 100. This is expressed mathematically as follows:

% Change in HDI= [(end year HDI - start year HDI)/start year HDI] x100

In the third step, the overall percentage changes in HDI for female and male leaders are determined separately. Thus, a single overall total percentage change in HDI is obtained for each of the two sets of leaders.

The fourth step involves calculating the final percentage change in HDI between female leaders as a group and male leaders as a group using data from third step. The equation for this calculation is as shown below:

% Change in HDI between female & male leaders= [(Total increase in HDI for female leaders as group - Total increase in HDI for male leaders as group)/ Total increase in HDI for male leaders as group] x100

The final percent change in HDI (calculated in the fourth step) between female & male leaders determines how well women leaders perform against their male colleagues in the areas of improving education, health care and economic situation for their citizenry. This result provides an additional reason for having women leaders as heads-of-state besides the novelty, gender equity, fair treatment and collapse of glass ceiling factors.

The final and fifth step of the study involves testing for the statistical significance of the difference in the mean values of the HDI found for the male versus female leaders. The Z-test is employed given the large size of the samples (at least 30 observations) employed in this study and the independence of the two sample groups. The finding of this test will help determine whether the difference found between the two mean values is significant enough to conclude that female leaders perform better in comparison to their male colleagues in raising HDI scores.

RESULTS

Table 1 lists the starting and ending HDI data for women leaders and their male predecessors. Table 2 lists HDI data for Bandaranaike, Gandhi, Bhutto and Brundtland and for their male predecessors. It is noted that Bandaranaike's first term started in 1960 and ended in 1970. Gandhi's first term started in 1966 and ended in 1977. The earliest HDI data found was from 1960, thus, there were no HDI data analysis for first terms of Bandaranaike and Gandhi. Brundtland's first term was less than a year and thus not part of Table 1. Table 3 lists the third term HDI data for Bandaranaike and her male predecessors.

Table 1: Starting and Ending Timeline and Corresponding HDI Data for Female and Male Leaders

Last Name	Country	SY1(F)	HDISY1 (F)	EY1(F)	HDI1EY (F)	%chng.T1 (F)	SY1 (M)	HDISY1 (M)	EY1 (M)	HDI1EY (M)	%chng.T1 (M)
Domitien	CAR	1976	0.214	1977	0.217	1.402	1975	0.211	1976	0.214	1.422
Boye	Senegal	2002	0.48	2003	0.483	0.625	2001	0.476	2002	0.48	0.84
Diogo	Mozambique	2005	0.361	2006	0.366	1.385	2004	0.356	2005	0.361	1.404
Peron	Argentina	1975	0.769	1977	0.777	1.04	1973	0.761	1975	0.769	1.051
de Chamorro	Nicaragua	1991	0.595	1997	0.623	4.706	1985	0.584	1991	0.595	1.884
Campbell	Canada	1994	0.94	1995	0.941	0.106	1993	0.939	1994	0.94	0.106
Jagan	Guyana	1998	0.706	2000	0.708	0.283	1996	0.704	1998	0.706	0.284
Moscoso	Panama	2000	0.809	2005	0.827	2.225	1995	0.783	2000	0.809	3.321
Bandaranaike	Sri Lanka	x	x	x	x	x	x	x	x	x	X
Gandhi	India	x	x	x	x	x	x	x	x	x	X
Meir	Israel	1970	0.827	1975	0.845	2.177	1965	0.773	1970	0.827	6.986
Aquino	Philippines	1987	0.667	1993	0.704	5.547	1981	0.65	1987	0.667	2.615
Macapagal-Arroyo	Philippines	2002	0.731	2006	0.745	1.915	1998	0.719	2002	0.731	1.669
Bhutto	Pakistan	1989	0.437	1991	0.447	2.288	1987	0.424	1989	0.437	3.066
Zia/Wajed	Bangladesh	1992	0.4	2004	0.504	26	1980	0.331	1992	0.4	20.85
Ciller	Turkey	1994	0.72	1997	0.734	1.944	1991	0.705	1994	0.72	2.128
Kumaratunga	Sri Lanka	1995	0.701	2006	0.742	5.849	1984	0.665	1995	0.701	5.414
Shipley/Clark	New Zealand	1998	0.92	2006	0.944	2.609	1990	0.881	1998	0.92	4.427
Sukarnoputri	Indonesia	2002	0.696	2005	0.719	3.305	1999	0.668	2002	0.696	4.192
Thatcher	Great Britain	1980	0.892	1991	0.917	2.803	1969	0.871	1980	0.892	2.411
Finnbogadottir	Iceland	1981	0.892	1995	0.942	5.605	1967	0.86	1981	0.892	3.721
Brundtland	Norway	x	x	x	x	x	x	x	x	x	
Barbara	Malta	1983	0.782	1988	0.813	3.964	1978	0.752	1983	0.782	3.989
Robinson/McAlese	Ireland	1991	0.882	2002	0.944	7.029	1980	0.837	1991	0.882	5.376
Suchocka	Poland	1993	0.815	1994	0.819	0.491	1992	0.812	1993	0.815	0.369
Dreifuss	Switzerland	1999	0.941	2000	0.945	0.425	1998	0.934	1999	0.941	0.749
Vike-Freiberga	Latvia	2000	0.817	2006	0.863	5.63	1994	0.777	2000	0.817	5.148
Halonen	Finland	2001	0.94	2006	0.954	1.489	1996	0.92	2001	0.94	2.174

This table shows starting and ending timeline and corresponding HDI and percent change data for female and male leaders. SY1(F) refers to starting year for the female leader's first term. HDISY1(F) refers to HDI for SY1 (F). EY1(F) is the ending year for the female leader's first term.HDI1EY(F) refers to HDI for EY1(F). SY1(M) is the starting year for the male leader's first term. HDISY1(M) indicates HDI for SY1(M). EY1(M) is the ending year for the male leader's first term. HDI1EY(M) is the HDI for EY1(M).

Table 2: Bandaranaike, Gandhi, Bhutto and Brundtland's Second Term HDI Data

Last Name	Country	SY2(F)	HDISY2 (F)	EY2(F)	HDIEY2 (F)	%chng.T2 (F)	SY2 (M)	HDISY2 (M)	EY2 (M)	HDIEY2 (M)	%chng.T2 (M)
Bandaranaike	Sri Lanka	1971	0.511	1978	0.543	6.262	1964	0.487	1971	0.511	4.928
Gandhi	India	1981	0.442	1985	0.473	7.014	1977	0.418	1981	0.442	5.742
Bhutto	Pakistan	1994	0.459	1997	0.477	3.922	1991	0.447	1994	0.459	2.685
Brundtland	Norway	1987	0.891	1997	0.932	4.602	1977	0.866	1987	0.891	2.887

This table shows Bandaranaike, Gandhi, Bhutto and Brundtland's second term HDI and percent change data. SY2(F) refers to the starting year for the female leader's second term. HDISY2(F) is HDI for SY2(F). EY2(F) is the ending year for the female leader's second term. HDIEY2(F) refers to HDI for EY2(F). SY2(M) is the starting year for the male leader's second term. HDISY2(M) refers to HDI for SY2(M). EY2(M) refers to the ending year for the male leader's second term. HDIEY2(M) is HDI for EY2(M).

Table 3: Bandaranaike's Third Term HDI Data

Last Name	Country	SY3(F)	HDISY3 (F)	EY3(F)	HDIEY3 (F)	%chng.T3 (F)	SY3 (M)	HDISY3 (M)	EY3 (M)	HDIEY3 (M)	%chng.T3 (M)
Bandaranaike	Sri Lanka	1995	0.701	2001	0.724	3.281	1989	0.681	1995	0.701	2.937

This table shows Bandaranaike's third term HDI and percentage change data. SY3(F) is the starting year for the female leader's third term. HDISY3(F) refers to HDI for SY3(F). EY3(F) is the ending year for the female leader's third term. HDIEY3(F) is the HDI for EY3(F). SY3(M) is the starting year for the male leader's third term. HDISY3(M) is the HDI for SY3(M). EY3(M) is the ending year for the male leader's third term. HDIEY3(M) is the HDI for EY3(M).

Table 4 shows the percentage change calculation for the two groups. The results show that as a group, female leaders' HDI is higher than male leaders by approximately 10.65%. This result implies that female leaders are being more effective on issues--education, health and economic status--that lead to a better life for their citizen

Table 4: Percent Change in HDI Summary

Last Name		%chng.T1(F)		%chng.T1(M)	%chng.T2(F)	%chng.T2(M)	%chng.T3(F)	%chng.T3(M)
Domitien		1.402		1.422				
Boye		0.625		0.84				
Diogo		1.385		1.404				
Peron		1.04		1.051				
de Chamorro		4.706		1.884				
Campbell		0.106		0.106				
Jagan		0.283		0.284				
Moscoso		2.225		3.321				
Bandaranaike		x		x	6.262	4.928	3.281	2.937
Gandhi		x		x	7.014	5.742		
Meir		2.177		6.986				
Aquino		5.547		2.615				
Macapagal-Arroyo		1.915		1.669				
Bhutto		2.288		3.066	3.922	2.685		
Zia/Wajed		26		20.846				
Ciller		1.944		2.128				
Kumaratunga		5.849		5.414				
Shipley/Clark		2.609		4.427				
Sukarnoputri		3.305		4.192				
Thatcher		2.803		2.411				
Finnbogadottir		5.605		3.721				
Brundtland		x		x	4.602	2.887		
Barbara		3.964		3.989				
Robinson/McAleese		7.029		5.376				
Suchocka		0.491		0.369				
Dreifuss		0.425		0.749				
Vike-Freiberga		5.63		5.148				
Halonen		1.489		2.174				
Total		90.842		85.592	21.8	16.24	3.281	2.937
Overall Total	Women	**115.923**	Men	**104.769**				

This table shows the overall percentage change in HDI between female and male leaders as a group.

Table 5 shows the results for the z-test for the difference in the mean values between the two groups of leaders. The finding indicates that, at 5% significance level (or at 95% confidence level), there is not enough evidence to support the claim that there is a difference in the mean HDI values of the female and male leaders from the samples employed in this study. Thus, the difference of 10.65% between the two samples employed here is not sufficient to conclude that the women leaders' HDI is statistically significantly higher than that of their male colleagues. The performance of women leaders in improving the HDI is relatively the same as that of the performance by the male leaders.

Table 5: Z- Test for Two Sample Means

	Female Leaders	Male Leaders
Mean HDI value	3.8541	3.4924
Known sample variance	21.96	13.993
Observation	30	30
Hypothesized mean difference	0.103578	
z value	0.2358	
P(Z<=z) one tail	0.4068	
z Critical one tail	1.6449	
P(Z<=z) two -tail	0.8136	
Z Critical two-tail	1.96	

This table shows the results for the z-test for the difference in the mean values between the two groups of leaders. The critical Z-values are based on 5% significance level (or 95% confidence level).

Geographically, the leaders were placed into the following regions: Africa, Americas (North, South, and Latin America), Asia-Pacific and Europe.

In *Africa*, Domitien of Central African Republic, Boye of Senegal and Diogo of Mozambique were compared against their male counter parts. Their male counterparts outperformed the three women leaders as a group by 6.929%. Only Domitien of Central African Republic outperformed her male counterpart.

In the *Americas*, Peron of Argentina, de Chamorro of Nicaragua, Campbell of Canada, Jagan of Guyana, and Moscoso of Panama were compared with their male counterparts. These five women leaders outperformed their male counterparts by 25.79%. The biggest reason for the women's good performance is de Chamorro of Nicaragua who outperformed her male counterpart by a whopping 132.58%. The other women leaders perform similar to their male counterparts with Moscoso of Panama lagging her male counterpart.

In *Asia-Pacific*, S. Bandaranaike & C. Kumaratunga of Sri Lanka, I. Gandhi of India, Meir of Israel, Aquino & Macapagal-Arroyo of Philippines, Bhutto of Pakistan, Zia & Wajed of Bangladesh, Ciller of Turkey, Shipley & Clark of New Zealand, and Sukarnoputri of Indonesia were compared with their male counterparts. This group of thirteen outperformed their male counterparts by 6.62%. A closer look at this group shows that six leaders (Meir, Bhutto-1st term, Ciller, Shipley & Clark, and Sukarnoputri lagged), while the others outperformed the male leaders for the equivalent period. More importantly, the Zia/Wajed duo outperformed male leaders in Bangladesh by 24.72%.

Finally, in *Europe*, Thatcher of Great Britain, Finnbogadottir of Iceland, Brundtland of Norway, Barbara of Malta, Robinson & McAleese of Ireland, Suchocka of Poland, Dreifuss of Switzerland, Vike-Freiberga of Latvia and Halonen of Finland were compared with their male counterparts. This group of ten European leaders outperformed their male counterparts by 19.44%. With the exception of Dreifuss and Halonen, the rest of the group outperformed their male counterparts.

Overall, women leaders in Americas--mainly because of de Chamorro of Nicaragua--performed the best, followed by women leaders in Asia-Pacific, then Europe, and Africa. In addition, as stated above, for this study Asia-Pacific had the most women leaders with thirteen, ten in Europe, five in Americas and finally three in Africa.

An analysis of election campaigns or slogans for elected female candidates does not reveal that women candidates made female empowerment or issues specific to women part of their campaign. Mostly, they campaigned on issues like education, reduction of poverty and better healthcare. These issues are gender neutral and for betterment of all persons in any society. Interestingly, most of these women have reached their positions due to familial relationships. Mainly, their husbands held the same office before. Thus, it

is possible that if the women leaders had risen up the ranks on their own and focused on the HDI component issues--education, healthcare, better socioeconomic status--then it is possible that the HDI during their tenure would have improved even more than what the data shows.

With availability of more HDI data, this topic will be investigated in a future study. Recently, there have been women leaders elected in Germany, Argentina, and Chile and thus in the next decade there is likelihood of sufficient data to allow for a far more robust analysis and conclusion. Areas of further investigation in the future study include incorporating the percent change in the HDI based on female leader's HDI data following male leader's HDI data, and distinguishing between executive and ceremonial leadership positions. For example, in India the Prime Minister (as is customary in many commonwealth nations) has the executive power while the President holds ceremonial power.

CONCLUDING COMMENTS

The objective of this study is to determine based on numerical data, whether women heads of state improve the HDI of their country in comparison with their male predecessors. The HDI data cited in this study is from the Human Development Reports prepared by the office of United Nations Development Programme (UNDP). The study compared the percent change in HDI for an equal duration between male and female leaders of selected countries. Women heads -of-state in the office for a year or less and, some women heads-of-state in power for more than a year were not part of this study due to lack of HDI data. An analysis of HDI data shows that women leaders throughout the world have a better record in improving the human development of their citizenry. However, this analysis is constrained by lack of HDI data in certain instances and the fact that in many countries women heads-of-state have been elected only recently. Given the constraints, it is still important to note that women leaders have emphasized the growth and development of their people, arguably the most important role of a leader. With the availability of robust HDI data in future, another study will conclusively point to the gender of heads-of-state who improve human development.

REFERENCES

Basch, L., Dutt, M., Ensler, E., Germain, A., Gould, S., Grumm, C., Gupta, G.R., Makinson, C., Ramdas, K., Salbi, Z. (2009). Open Letter to President-elect Barack Obama by Women's Rights Leaders. *Feminist.com*. Retrieved May 27, 2009 from http://www.feminist.com/news/openletter.html

Carroll, S. (2000). *Representing Women: Congresswomen's Perceptions of their Representational Roles*. Retrieved January 19, 2010, from http://www.capwip.org/readingroom/congroles.pdf

Curtin, J. (2008). *Comparing Pathways to Power: Women and Political Leadership in New Zealand*. Retrieved May 27, 2009, from http://epress.anu.edu.au/anzsog/public_leadership/mobile_devices/ch22.html

Kristof, Nicholas D. and WuDunn, Sheryl (2009, August 22-23). Empowering women to fight poverty's injustices. *International Herald Tribune*, p. 1, 4.

Liswood, L. (1995). *Women World Leaders: Fifteen great politicians tell their stories*. New York: New York University Press.

Lowen, L. (2008, June 15). Choosing Hillary - Why Clinton could never live up to our expectations. *About.com*. Retrieved May 7, 2009 from http://womenissues.about.com/od/commentary2008race/a/ChoosingHillary.htm?p=1

Nzegwu, N. (2006). Editorial: Women and Political Leadership. *JENDA: A Journal of Culture and African Women Studies*, 9. Retrieved May 27, 2009, from http://www.jendajournal.com/issue9/nzegwul.html

O'Connor, Karen. (n.d.). Do Women in Local, State, and National Legislative Bodies Matter? A Definitive Yes Proves Three Decades of Research By Political Scientists. Retrieved January 17, 2010, from http://www.oklahomawomensnetwork.com/.../Why%20Women%20Matter%20paper.doc

Onofre, A. J. (2009). *Women: Presidents and Prime Ministers in the 20th Century*. Retrieved May 27, 2009, from http://www.ezinearticles.com/?Women:-Presidents-And-Prime-Ministers-In-The-20th-Century & …

Powell, D. H. (2009, March 18). Commentary: "Educate a woman, create a Nation'. *CNN.Com*. Retrieved May 27, 2009, from http://www.cnn.com/2009/WORLD/Americas/03/13/powell.women.index.html

United Nations Development Programme. (1998). Human Development Report. Retrieved March 24, 2009, from http://hdr.undp.org/en/reports/global/hdr1998/chapters/

United Nations Development Programme. (2002). Human Development Report. Retrieved March 24, 2009, from http://hdr.undp.org/en/media/HDR_2002_EN_Complete.pdf

United Nations Development Programme. (2008). Human Development Report. Retrieved March 24, 2009, from http://hdr.undp.org/en/media/HDI_2008_EN_Complete.pdf

Women rights activists discuss human development, call for strengthening a woman's role in society. (2009). Retrieved May 27, 2009, from http://www.undp.org.ua/en/media/41-democratic-governance/771-women-rights-actvists-…

Worldwide Guide to Women in Leadership: Woman elected or appointed Heads of State and Government. Retrieved March 24, 2009, from http://www.guide2womenleaders.com/Female_Leaders.htm

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