I will adopt a linear model for this research design. It will take the form of a progression of linear steps that are simple to follow. The first of these steps is to define the theory I will be investigating and develop my hypothesis.

Introduction

The exclusion of women from politics, in particular political office, can be charted back to as early as 350BC when Aristotle, in his 'Politics' treatise, classed women, children and slaves as external to his definition of a citizen. Despite the legacy of the suffragette movement of the early 20th century, and the contemporary claims of sexual equality, politics remains, essentially, a political domain.

From initial observations of party lists and parliamentary data from the Inter-Parliamentary Union, it transpired that, despite obviously making up 50% of any population, women's actual representation in parliaments fell to as low as 5% (Appendix 1). Although there are clearly some ideological explanations for this, such as a society's attitude to women, or more practical reasons, for example the candidate nomination process of a party, I was interested in ascertaining whether any more widespread conclusions could be made if the social and economic status of the country and of the women in that country were investigated. It was possible to observe from the preliminary findings that the Nordic countries (Sweden, Norway, Finland and Denmark) possessed the most representative of parliaments, with percentages at 35+. From a second year course taken on the Modern Europe Welfare State, I was aware of the distinct nature of Nordic welfare provisions and attitudes;

- High degree of state involvement in the welfare of citizens
- Approximately 30% of total labour force employed in social, health and educational sectors
- Universal social insurance systems
- Highly advanced level of gender-equality; the labour market characterised by high level of female employment, wage equality and provisions for working mothers (Kuhnle 1998)

It is the inclusion of women in the labour market that prompted the question as to whether social (ie – welfare, education) and economic (ie – wage equality, employment rates) factors do have a significant effect on levels of women seats in parliaments.

Research Question: Do socio-economic factors affect the levels of women seats in parliaments of the OECD countries? If so, to what extent?

In order to answer this question accurately, it is necessary first to examine the existing literature and research.

LITERATURE REVIEW

In order to identity the specific fields within the broad genre of socio-economic trends that affect the percentage of women in parliament, it is necessary to review current theoretical research and information. It is clear from preliminary review that the most recent literature focuses on discrimination towards women within the party system itself, rather than national factors that affect the socio-economic status of women. The literature suggests, however, that these *structural* issues and obstacles remain important. Reynolds (1999), in his study on socio-economic development using the UN gender-related development index, found that the levels of women in parliament were affected by socio-economic factors across the globe. Therefore, a quantitative update on the current socio-economic position of women within their countries is needed and will significantly contribute to the body of work on women in politics.

Supply-side v. Demand-side explanations

The main body of literature on this subject can be classified into two competing explanations; supply-side and demand-side. The former refers to the failure of women to come forward as political candidates in sufficient numbers due to challenges presented to them by the country's aggregate level of social, economic and political development. Demand-side explanations take a more pragmatic approach and allocate the blame with the political parties themselves and the masculine culture that obstructs the pathway into politics. This organisational bias has been heavily researched, examples of which are Sophie Watson's investigation into the "chap culture" of the senior levels of the UK Civil Service and Susan Halford's studies of Local Government Women's Committees. It is, however, the obstacles presented by social and economic factors, which fall into the supply-side category, that appear to require an updated analysis.

Economic capital

The industrial revolution resulted in the exclusion of women from power and, for Lovenduski (1996), among others, the stunted economic position of women and their employment and wage status is a highly significant factor in this debate.

> 'Where men and women share in the same domain, all kinds of power and authority tend to be shared more equally. Certainly this is the lesson of European history – before the public domain was separated from the private – women exercised power.' (Rosaldo & Lamphere 1974)

However, the economic survival of the family is not guaranteed by the participation of the male in the labour force. Women have long contributed to income of the family that is not technically regarded as 'economic participation'. Moreover, the UK Equal Opportunities Commission has published findings, as recent as 2005, that show women receiving a lower wage than men for the same job, approximately 18% less. It therefore appears that data on the economic position of women would contribute to a greater understanding of female under-representation.

Employment

The social construction of gender has resulted in specific industries being dominated by either males or females. For example, the service industry is predominantly female whilst 'political elites tend to be dominated by representatives from a small number of occupational groups, particularly professionals' (Norris 1987: 124).

Also factored into this topic is the 'double burden' that women are forced to contend with, sustaining employment whilst usually being the primary carer for the family. It is therefore argued that 'the double shift of employment and domestic responsibilities which women undertake makes the idea of a triple shift unthinkable' (Allwood & Wadia 2000: 143). Additionally, comparative studies of established democratic states have stressed the importance of the female group in professional, administrative and managerial occupations that commonly lead to political careers (Rule 1987). An investigation into the characteristics of MP's in the UK House of Commons found that British politicians were predominantly recruited from the professions. Therefore, any data on the percentage of women within certain sectors of the labour market would contribute to this study.

Education

A higher level of education is correlated with higher levels of political participation, knowledge of, and interest in politics;

> 'education leads to greater participation for many reasons. It is argued that the more educated are more likely to follow current affairs in the media, to acquire more information about government, to feel confident about discussing political issues and to feel capable of influencing government.' (Norris 1987: 121)

Also, Researchers have shown that women need to have more experience and educational credentials than their male counterparts, especially the younger women (Dubeck 1976). Comparison of educational opportunities for women within democracies may show some correlation between representation and education.

Family

The family structure and the 'legislative constructions of motherhood' (Millns 1995) are cited as restricting access for women to political activism. The Fawcett Society support and diversify this view by the development of the '4 C's' model; culture, childcare, cash and confidence. They found that women were far more likely to be responsible for the care of children, the elderly and the sick, hence restricting their opportunities to participate in a culture that required persistence, flexibility and a stable supporting income. Statistics that charted the birth rate, the fertility rate and the childcare facilities of a state would help to substantiate this claim across a wider sample.

Structure / Institutions

There is also considerable support for the theories surrounding the type of election system in place within a state. The 'electoral institutionalist' theory argues that the structures in place play a significant role in closing the representation gap.

Writings on electoral and voting systems (Matland 1995, Darcy, Welch & Clark 1994) argue that the structure instituted, such as the district magnitude and the candidate nomination process, within a state is a crucial factor in the level of women representatives. For example, proportional representation with party list system gives women candidates a higher chance of success (Norris 1987).

The nuances within the electoral system are also said to have an effect on the number of women elected to parliament. Rule and Zimmerman (1992) argue that the ballot structure (single candidate nominations or party lists) and degree of proportionality (the allocation of votes to seats), as factors, should not be overlooked.

Psychology

There is also a less documented body of work that provides an ideological and psychological basis for the level of women in parliament. That is, female under-representation is a direct result of the differing male and female characteristics. That is, politics is often regarded as a masculine and violent domain, hence women, with their softer stereotype, are unsuitable for the nature of the tasks. This theory is developed by Dahlerup (1988) and Bystydenski (1992) who argue that if women and men do differ in their underlying values, then the shift in parliament from non-representative to partially-representative will result in a complete transformation of the institutional culture, political discourse and policy agenda.

Literature Review Conclusions

The range of theories can be summarised well using the Norris and Lovenduski (1995) multi-dimensional model is used to describe the factors involved. There are, within this system, three levels at which women are constrained; systematic, party political and individual. Despite the extensive interest and research that has been accomplished within this field, I believe that the current trend of placing more weight on demand-side explanations has left the supply-side reasons out-of-date and ignored. I feel that a comprehensive and highly current study into various socio-economic factors would deeply benefit the contemporary debate. This is because, although attitudes and ideologies take time and persuasion to alter, economic decisions made by either national or international organisations can instantly affect the status of an individual within a country.

DATA SPECIFICATION & COLLECTION

Dependent Variable: Women seats in Parliament (%)

Independent Variables: Employment of women (% total workforce)
Gender balance in the workforce – specific to industry
Gender balance in salary (wage equality)
Welfare provisions - % spent on health, education and childcare

Spurious/intervening: District Magnitude
Number of seats contested in district
Percentage of seats allocated in lower house

Number of districts
Party-list system

Case Selection

I have chosen to compare the data of all of the 25 OECD (Organisation for Economic Co-operation and Development) countries. Therefore my research will take the form of a cross-national comparative study that I believe will allow me to 'identify, analyse and explain similarities and differences across societies' (Hantrais 1995: 1). The OECD countries all share the same commitment to democratic forms of government and a market economy system and therefore a suitable choice for comparison. They are linked together by strong ideological bonds yet all practice very different welfare and micro-economic systems. The 25 countries being compared in my study, 'by the 1990's, were all industrialised, relatively affluent and democratic. They are countries which can be sensibly compared because they have many basic things in common' (Castles 1998: 16)

The choice of these countries is made on the basis on Hague and Harrop's (2001) explication of the key advantages of this method. Firstly, it allows for the contextualisation of knowledge, in this case, allowing the research to provide a broader context for the low levels of female representation. It allows contributes in the improvement of classifications, a more up to data study on the socio-economic status of the OECD countries, in relation to the total women seats, may provide a more detailed insight into their groupings. Thirdly, comparative research facilitates hypothesis-testing and formulation. Once my research is complete, there is potential that a new hypothesis could be developed that focused on one specific feature of social or economic behaviour as a result of the initial research. Finally, this style of comparative research enables the researcher to make predictions; perhaps a small alteration in social welfare policy in this country, based on conclusion reached in the cross-national analysis, could positively affect the level of direct female representation.

There are also, unfortunately, some disadvantages to comparative research. A key problem in all cross-national comparative studies is the gaining of access to data that is comparable and achieves 'agreement over conceptual and functional equivalence and research parameters' (Hantrais 1995: 1). However, for the purposes of my study, I have found two sets of large-scale, harmonised international data that I believe to be both reliable and relevant. Both sources are established international organisations that are non-partisan and committed to the position development of society. Another problem is that often, concepts are not applicable across countries. However, for this study, the selection of countries falls within a pre-decided world category, which combats this problem.

The range of sources available to measure the desired type of data is slightly limited. It is necessary that the statistics originate from a reliable source that can be trusted. After some initial investigation, it has become clear that the two key sources for my socio-economic variables are the UN development indicators and the World Bank development indicators. As the design of this research project depends solely on absolute figures, the two sources appear adequate in terms of reliability and range. As shown in Appendix 2, there are sufficiently varied indicators that will contribute to

this study. The collection of data can be carried out either through the Internet (for the UN and CSES data) or access to the Learning & Resource Centre at Edinburgh University (using the World Bank CD-ROM). This means that costs of the project are virtually negligible and it is very time efficient.

In order to obtain data for the electoral process of each country, I shall use information already compiled by the 'Comparative Study of Electoral Systems' (CSES). More specifically, the 'District-Level Variables' (that measure district magnitude, number of seats contested etc) and 'Macro-Level Variables' (that measure the percentage of seats allocated in the lower house, electoral segments, number of primary electoral districts, party lists). All of these statistics are represented in the CSES surveys as quantitative continuous data and therefore can be used in the analysis easily. The data is updated regularly and the information is regarded as reliable and legitimate. The organisation was designed as a public dataset to be freely available for use in comparative and cross-national studies and hence holds credence with social scientists throughout the world.

In some cases both the UN and the World Bank claim to be measuring the same value and therefore it is possible to triangulate the two sets of statistics somewhat in order to test their validity. For example, an evidence of an overlapping value is literacy rate. In this case, both values would be examined and the statistic that was most relevant to the research question would be used in the analysis. It is important to note that the UN statistics are specifically 'gender-related' and therefore the indicators are designed to highlight the differences between men and women, which may make them more useful in the final statistical analysis.

Although 'authenticity can be a particular problem in research based on Internet sources' (Burnham et al. 2004: 190) and should be 'approached with at least as much…rigour as other types of research materials', it does have many advantages. The information is available quickly, at any time and without need for preparation (such as permission to be asked). It is also updated regularly which therefore contributes to the relevance of the project being undertaken.

DATA ANALYSIS

I intend to analyse the data in two ways. In the first instance, I will investigate the strength of the relationship between each IV and the DV. To do this I will use Pearson's product correlation coefficient. This equation uses the continuous data gathered to produce a value from +1 to –1, which in turn indicates the level of linearity of the relationship. The equation is as follows;

$$r = \frac{\Sigma \ (x_i - \underline{x}) \ (y_i - \underline{y})}{(n - 1) \ s \ x \ s_y}$$

Pearson's correlation coefficient is relevant for this project as it informs the researcher about the 'strength and direction of the correlation' (Burnham et al. 2004: 163). Once the value has been obtained for each IV, including the intervening variables, I will be able to chart the factors which have the highest effect on the percentage of women in

parliament and which can be disregarded. More sophisticated analysis can then occur in form of multiple regression.

This is a suitable tool of analysis for the following reasons. Firstly, it charts the depth of the relationship between a dependent variable (number of women seats) and a variety of independent variables. Therefore, the independent variables are assessed as a group and not individually therefore 'maximising the levels of explained variance, whilst simultaneously including only terms which are statistically significant' (Castles 1998: 19). It shows which of the IV are strongly influential and which have little effect on the DV. It is also useful as it shows if there is any overlap between the IV's and if they interact in any way.

However, multiple regression is only successful in estimating the relationship between the dependent and independent variable if the relationship is linear, and initial observations have shown my variables' relationship to be linear in nature. Also, although multiple regression allows for exploration of the effect of more than one independent variable, it is also quite awkward to use. The best models provide only 3 or 4 independent variables. I intend to decide which IV to use once I have gathered my data in order to create the most significant and contributory model.

Essentially, multiple regression is an extended version of single linear regression that means prediction or estimation of one variable from others is possible, although the reliability of this figure is dubious when outside the range of original data. Therefore, when a regression line is drawn, it is possible to use this information to predict the value of the dependent variable using the model created whilst also allowing calculation of the total variance as a result of the combination of variables.

I believe that my two-step approach to data analysis will prove very effective in focusing the study and will help me to make more sophisticated causal inferences.

ETHICAL CONSIDERATIONS

The five basic ethical considerations that should be taken into account when starting any research are as follows;

- **Avoidance of harm** – the intention of my research is to provide positive conclusions that will help with the representation of women in parliament and therefore I can see no area in which people would be harmed through it.
- **Avoidance of deception** – I am using sources that are available to access freely and hence check the validity of. I intend to represent the data in a true and fair way without distorting it to fit my hypothesis.
- **Privacy** – The data I am using is not specific to any individual and has been compiled with the consent of the countries involved.
- **Confidentiality** – There is not information or data in my project that will necessitate the upholding of any confidentiality agreement.
- **Consent** – Once again, the data I am using is already collected and therefore I am not in a position to obtain consent.

Ultimately, I am using pre-obtained information that I will analyse in a specific way in order to prove or disprove a theory. The data is not specific to any individuals and therefore does not violate an ethical code. Due to this, there really are no major ethical issues as the data has been collected previously. I will, of course, adhere to a professional code of conduct and cite all my research properly and credit the organisations that collected the data I will use in my analysis.

TIME MANAGEMENT

The organisation of this project is important as the nature of the design involves a large amount of data examination and analysis. The sorting of statistics and evaluation of the best value will be time consuming and therefore it is necessary that I allocate sufficient time for this to take place. I have designed the time plan on the basis that I will use this project as my dissertation and hence will have to complete it by March 2005.

Task	August	September	October	November	December	January	February	March
Theory Development								
Data Collection		**World Bank**	**UN**	**CSES**				
Data Analysis					**Pearson's Correlation Coefficient**	**Multiple Regression**		
Inferences and Conclusions								
Distribution								

PUBLICATION

This research is based on previous studies and established theories. My main aim is to produce an updated version of the data and to analyse it using methods that relate to my research question. In terms of distribution, there are a number of organisations that would be appreciative of this project;

- The Fawcett Society
- The Equal Opportunities Commission
- The Inter-Parliamentary Union

I will ensure that my research reaches these organisations by posting and e-mailing the project to them with a covering letter briefly outlining my initial aims.

Implications of this research are wide reaching and it is my belief that the findings could influence future policy. The UK, although not the worst offender in levels of female representation, could learn from its Nordic neighbours and, if it is shown that certain increases in education or childcare do affect the levels of female seats in parliament, steps could easily be taken to change the situation in this country.

CONCLUSION

My approach to this research is wholly quantitative-centred and, despite there being a large body of work on the more qualitative aspects of female representation, citing inherent psychological and behavioural differences between the sexes, I believe there to be more need for a re-examination of the social and economic factors. However, my research may result in my research question being rendered completely void and irrelevant.

My methods are simple, time-effective and parsimonious. They involve no surveying or fieldwork and rely solely on data collected by professional bodies and organisations. I consider the design of this research project to be effective and potentially successful in the reaching of conclusions that will have a positive effect on the circumstances regarding the level of women in parliament.

Appendix II
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Relevant Statistics
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WORLD DEVELOPMENT INDICATORS (WDI)

Population and demographics

Age dependency ratio (dependants to working-age population)
Birth rate, crude (per 1,000 people)
Contraceptive prevalence (% of women ages 15-49)
Death rate, crude (per 1,000 people)

Population ages 0-14 (% of total)
Population ages 0-14, female
Population ages 0-14, male
Population ages 0-14, total
Population ages 65 and above (% of total)
Population ages 65 and above, female
Population ages 65 and above, male
Population ages 65 and above, total
Population density (people per sq km)
Population growth (annual %)
Population, female (% of total)
Population, total

Labour and employment

Employees, agriculture, female (% of female employment)
Employees, industry, female (% of female employment)
Employees, services, female (% of female employment)

Labour force with primary education, female (% of female labour force)
Labour force with primary education, male (% of male labour force)
Labour force with secondary education (% of total)
Labour force with secondary education, female (% of female labour force)
Labour force with secondary education, male (% of male labour force)
Labour force with tertiary education (% of total)
Labour force with tertiary education, female (% of female labour force)
Labour force with tertiary education, male (% of male labour force)

Labour force, female (% of total labour force)
Unemployment, female (% of female labour force)

Poverty and income distribution

GINI index

Education

Apparent intake rate in grade 1, female (% of relevant age group)
Expenditure per student, primary (% of GDP per capita)
Expenditure per student, secondary (% of GDP per capita)
Expenditure per student, tertiary (% of GDP per capita)
Literacy rate, adult female (% of females ages 15 and above)
Literacy rate, youth female (% of females ages 15-24)
Net intake rate in grade 1, female (% of official school-age population)
Persistence to grade 5, female (% of cohort)
Primary completion rate, female (% of relevant age group)
Primary education, pupils (% female)
Primary education, teachers (% female)
Public spending on education, total (% of GDP)

Ratio of girls to boys in primary and secondary education (%)
Ratio of young literate females to males (% ages 15-24)

School enrolment, primary, female (% gross)
School enrolment, primary, female (% net)

School enrolment, secondary, female (% gross)
School enrolment, secondary, female (% net)

School enrolment, tertiary, female (% gross)

Secondary education, pupils (% female)

Health

Births attended by skilled health staff (% of total)
Health expenditure per capita (current US$)
Hospital beds (per 1,000 people)

UN INDEX OF GENDER-RELATED DEVELOPMENT (GDI)

Gender-related development index

Female life expectancy at birth (years)
Female adult literacy rate (% age 15 and above)
Female combined primary, secondary and tertiary gross enrolment ratio (%)
Female estimated earned income (PPP US$)

Female legislators, senior officials and managers (as % of total)
Female professionals and technical workers (as % of total)
Ratio of estimated female to male earned income

Gender inequality in education

Female adult literacy rate (% age 15 and above)
Adult literacy rate (female as % of male)
Female youth literacy rate (% age 15-24)
Youth literacy rate (female as % of male)
Female primary net enrolment ratio
Primary net enrolment ratio (female as % of male)
Female secondary net enrolment ratio
Secondary net enrolment ratio (female as % of male)
Female tertiary gross enrolment ratio
Tertiary gross enrolment ratio (female as % of male)

Gender inequality in economic activity

Female economic activity rate (% age 15 and above)
Female economic activity rate (index, 1990=100, age 15 and above)
Female economic activity rate (as % of male rate, age 15 and above)
Female employment in agriculture (as a % of female labour force)
Female employment in industry (as a % of female labour force)
Female employment in services (as a % of female labour force)
Female contributing family workers (as % of total)

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