# Women Empowerment: A Comparison of Socio-Economic Perspectives with Political Aspects

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| ARTICLE INFO | ABSTRACT |
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This study aims to investigates the social, economic and some political determinants of women empowerment by determining whether economic and social factors are more important compared to the political factors or not. The comparison between 34-developed and 34-developing countries has been made by constructing a weighted index of women empowerment by using annual data ranging from 1990 to 2023 based on the social and economic spheres of the women life. The political aspects are employed by using women political empowerment index already developed by V-Dem. The study evaluates the capability approach through panel data fixed effects models. This approach conceptualizes women empowerment by focusing social and economic dimensions of the women life mainly. Panel data analysis has been performed based on cross section fixed effect models and generalized least square regression with ARMA components to deal with autocorrelation. The findings suggest that developing countries need to advance the socio-economic factors to empower their women population such as increased educational access, raising the level of life expectancy and provide opportunities for political role whereas developed countries should focus on expansion in economic opportunities and health facilities for women to ensure the women empowerment effectively. Hence the set of policies needed in case of developing countries should focus more on social empowerment whereas developed countries more on economic empowerment.

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## 1. Introduction

Around fifty percent of the world population consists of women, hence their right to provide them equal opportunities to grow alongside men is a valid issue of women empowerment. According to world vision[1], the Women empowerment is actually "*to promoting women's sense of self-worth, their ability to determine their own choices, and their right to influence social change for themselves and others*" . These choices and influence for social change is highly dependent on the resources a woman is endowed with, such as the type and level of education she has, the financial ownership for her own earnings or on family income, her status within and outside family, how she can contribute to labor force and how much she has capabilities  to participate in political and social process through her services. Now the problem is that when developing countries are designing their policies they just follow the policy design of developed countries by whom either these are inspired or influenced. But the scenarios of these countries are totally different. Consequently, there is need to study how

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[1] https://www.worldvision.com.au/womens-empowerment

women empowerment may have different context in developing countries compared to developed ones. This study is an effort to highlight those dimensions of women life whereas developing and developed countries should focus to achieve excellence in the empowerment of women in respective countries. This study provides an answer to the question how developing countries are significantly different from developed countries within the context of women empowerment by aiming at the three more relevant context of women life including social, economic and political ones. Accordingly, those variables are considered for this study which reflect the Social, Economic and political dimensions and then compare the socio-economic aspects with Political aspects as well.

The concept related to 'Women Empowerment' has evolved after 1987 with the publication of a book titled: *Development, Crises and Alternative Visions: Third World Women's Perspectives* by Gita Sen and Caren Grown (Calvès, 2009). Women empowerment refers to give equal rights to women and enhance the social, political and economic strength of women. Empowerment makes them confident to live with self-respect, dignity and gives equal opportunity for education without any gender bias. Women empowerment ensures a strong and healthy family where she can contribute to economic growth through manage and educating her children, participating in labor force; support family structure to make family institution more productive. As a half population of each country women may play their positive role to support their families financially as well. The basic social and economic ingredients of women empowerment are education, health and employment. Since it is believed that in developing countries economic empowerment of women will lead to reduce the intensity of poverty because one the one side the total number of dependents in population will reduce and the size of labor force will increase on the other. Woman empowerment can be enhanced with educational attainments because it enables people to become self-directed, improves standard of living and ensure the attainment of gender equality in society. Developed countries like United States has successfully remove the gender gap in education while in developing countries there is still a wide gap between them because of social exclusion of women especially in non-urban social structures. According to the gender global gap among 144 countries 17 have gap in education (Gender Global Gap, 2016). According to the facts provided by UN Women a United Nations entity working for the gender equality and empowerment of the women since July 2010 in United States, women in extreme poverty are 10.3 percent; about 73.5 percent working women don't have any access to social protection; 4 percent don't have access to bank accounts; women not using internet are 37 percent; around 2.7 billion women are legally not allowed to take jobs of their choice; gender gap in labor force is close to 30 percent that widens with child bearing; 90 percent women in low income countries are employed in informal sector compare to 60 globally; only 15% of the women are agricultural land holder; 20 percent less wages are paid compare to men; a large proportion of unpaid care and domestic work has been mainly performed by women only as estimated around 40 percent of the gross domestic product in some countries (Women, 2024, February). According to world economic forum the overall global gender gap is 68.4 percent.[2]

Women can also empower by increasing their role in political sector. Women status and lifestyle are discriminate in developing countries compared to developed countries and the difference between developing and developed countries in social, economic and political dimensions of women are also huge. In national parliament the Global participation rate of women till 2024 is 26.9%. In developing countries women participation in national parliament is very low and around 10 percent only. A recently developed index on "Women Political Empowerment" from Varieties of Democracy (V-Dem) has been considered in this study as well. Consequently, Women Political Empowerment Index (WPEI) has been compared with socio-economic dimensioned based index developed in this study. Since the WPEI has been compared in terms of economics growth Dahlum, Knutsen and (2022) based on the work conducted by Coppedge et al. (2020), and Sundström et al. (2017). The WPEI has been elaborated as:

*"Women's political empowerment is defined as a process of increasing capacity for women, leading to greater choice, agency, and participation in societal decision-making. It is understood to incorporate three equally-weighted dimensions: fundamental civil liberties,*
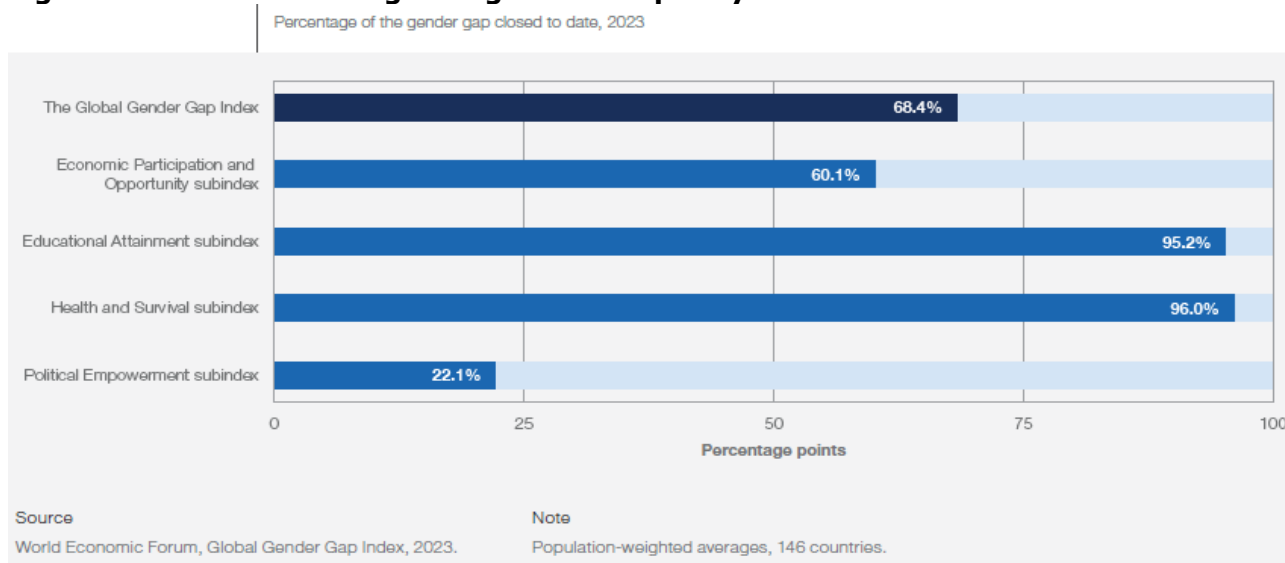
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[2] https://www.weforum.org/publications/global-gender-gap-report-2023/infographics-66115127a8/

*women's open discussion of political issues and participation in civil society organizations, and the descriptive representation of women in formal political positions*."

It is evident from figure 1, the gaps related to educational attainment and health with survival are very high and mainly contributing to keeping global gender gap larger.

**Figure 1: Main indices of global gender inequality**

Percentage of the gender gap closed to date, 2023

| Index | Percentage |
|---|---|
| The Global Gender Gap Index | 68.4% |
| Economic Participation and Opportunity subindex | 60.1% |
| Educational Attainment subindex | 95.2% |
| Health and Survival subindex | 96.0% |
| Political Empowerment subindex | 22.1% |

Percentage points

Source
World Economic Forum, Global Gender Gap Index, 2023.

Note
Population-weighted averages, 146 countries.

Source: (WEF, 2023)

Women empowerment is the core objective for development as 3rd goal of millennium development goals (MDGs) is related to women such as promotes gender equality and empower women. Reducing child mortality and improving maternal health and achieving universal access to reproductive health also related to women. The problem is most of the developing countries government has not been able to achieve the MDG target. Millennium Development Goals (MDGs) also examine the gender inequality among women political empowerment and wages of women which are nonagricultural. To strengthen the women capability to take the resources United Nation Development Program and world development have establish the different indictors to measure the women quality of development. Importance of women empowerment has been reinforced through fifth goal of sustainable development goals (SDGs). It targets the higher levels of gender equality and empowering all women. Consequently, this study will add value by emphasizing this issue and provide another perspective where policy makers can improve their policies to address it to their extent. In figure 2, the economic participation has been reflected across the world, where central Asia and southern Asia have the lowest female participation rate marginally better then the worse situation at northern Africa and western Asia.

**Figure 2: Global Situation of Female Labor Force Participation**

**Figure 3.8** The female labour force participation rate among prime-working-age women who are living in a household comprising a couple and with at least one child under age 6 varies widely across regions
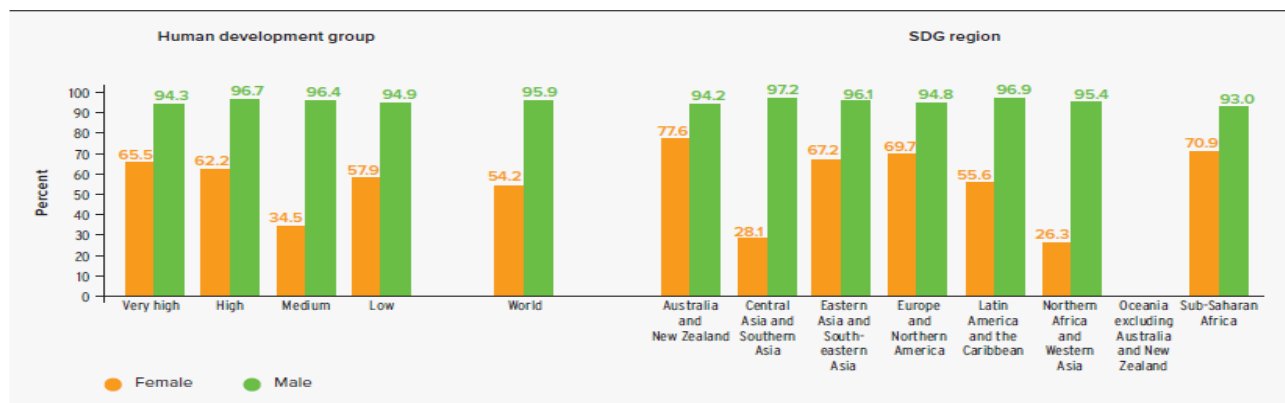


Source: ILO 2023.

Source:(Steiner & Bahous, 2023), p.21

The study is organized as, this section has provided the detailed introduction of women empowerment in terms of economic development and across various regions. Section 2 describes a thorough review of literature related to women empowerment considering both developing and developed countries situations. In section 3, the research methodology with respective theoretical and empirical justifications has been elaborated. Section 4 covers research design by providing the details related to estimation procedure, techniques of estimation being followed, description of all variables, their definition and sources of data collection. The results are discussed in section five and the conclusion with findings and policy suggestion are given in the last section respectively.

## 2.    Litrature Review

The very first objective US-AID[3] has identified is: " *Reduce gender disparities in who accesses, controls, and benefits from economic, social, political, legal, educational, health, and cultural resources, as well as wealth, opportunities, and services."*. the prime focus is on women empowerment in terms of her social and economic aspects. Social dimension is augmented through improved health and educational opportunities to the female.

Stromquist (2003) explores in his research that education is a key for women to empower. In developing countries girls' access to schooling is near to the ground. The concept of empowerment has been evaluated through formal and non-formal education programs where women empowerment has been found increasing in non-formal education programs. Governments in developing countries need to modify school textbooks and provide training to teachers for teaching gender-sensitive issues. Chen in his paper explored the information and communication role in gender equality which leads to long term economic growth. The results indicate that both variables education and employment show the positive impact on Information and Communication Technology (ICT). If gender inequality in education is reduced it directly reduces the gender inequality in labor force participation and causes economic development. Whereas due to ICT, increase in information and knowledge are used to change the public opinion about working women(Chen, 2004). The world economic forum has examined the women empowerment in the 58  different countries including all OECD countries and regions by employing the Gender Gap Index as a main indicator of the women empowerment. They measure the gender gap in five critical dimensions which are economic participation, economic opportunity, political empowerment, educational attainment and health and well-being. The result indicates that only some developed countries are closer to achieved equality between men and women in all five areas while most of the countries are far behind to give equality to women in all five dimensions. Nordic countries remain successful to bridge this gap otherwise most of the even developed countries gagging fa behind with wide variations in these five dimensions (Lopez-Claros, Zahidi, & mondial, 2005). Esther Duflo describes the interrelationship between economic development and women empowerment by observing that women are behind men in education, labor market opportunity and in political dimensions. Women empowerment leads to economic development if women take better decisions in household which are better for long term growth while economic development leads to gender equality if it gives more rights to women (Duflo, 2012). Bhoganadam, Malini and Rao (2014) proves that the economic development and women empowerment are closely related. They showed the bidirectional relationship between women empowerment and economic development. Development decreases the gender inequality and empowering the women lead to development (Ahmed, Azhar, & Mohammad; Dler M Ahmed, Z Azhar, & Aram J Mohammad, 2024; Dler Mousa Ahmed, Zubir Azhar, & Aram Jawhar Mohammad, 2024; Mohammad, 2015a, 2015b; Mohammad & Ahmed, 2017).

Another study measures the socio-economic and political determinants of women empowerment considering the situation in Pakistan. They have used cross-sectional data in four provinces and developed the cumulative index for women empowerment considering social, economic and political indexes. Their findings conclude that education, health, age, income, working status and awareness by media are the positive factors for women empowerment while no of children, type of family system and marital status have significant but negative impact on women empowerment in Pakistan (Meraj & Sadaqat, 2016). Bradshaw studies that the women's role in economic development and find the evidence in favor of

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[3] https://www.usaid.gov/gender-policy

investing in women based on women in development approach (WID) that helps to remove the discrimination among gender by enhancing women role in education and employment. While comparing with gender and development (GAD) approach which focuses on equality of men and women for development purpose the study has found that gender discrimination leads to poverty and less rapid growth in economies and produce inefficient outcomes (Bradshaw, Castellino, & Diop, 2017). A women empowerment index based on self-perceived empowerment has been developed through a survey of more than one hundred thousand women in Turkey. The factors evaluated include social life, health, income, personal care and education. However, women empowerment proves highly dependent on the areas of their residence in addition to above stated attributes (Cinar & Kose, 2018). Another study focusing on the Punjab, Pakistan by using Composite Women empowerment index has revealed that individual factors, familial level factors and socio-cultural factors increase the women empowerment. However, women position in the family and the family attitude towards women with the capability to use mobile phones significantly contribute to her empowerment (Batool & Batool, 2018). A study in conducted for northern Punjab has identified various factors responsible for women empowerment. A polychoric principal component analysis reveals that political participation with freewill to cast the vote, medical access, legal rights and marriage with women consent all lead to increase the women empowerment domestically but joint-family system weakens it (Batool, Anwar, & Asghar, 2021). Soharwardi and Ahmad (2020) have evaluated the five main dimensions of the women empowerment including self-esteem, awareness, self-confidence, work status, and the participation in decision making process in various countries. Women empowerment significantly depend on women own health, her number of children, her husband's education and employment status and even if she is younger than her husband although at the cost of her self-esteem. An interesting study in Nigeria has examined the socio-economic determinants of women empowerment. The men have more decision-making power than women due to less amount of both education and assets provided in marriage by women.

Consequently, more education provision and leverage to increase negotiating power of women through policy support has been suggested (Adekunle, Kutu, & Alori, 2021). In a study assessing the women empowerment status in Pakistan (Abbas et al., 2021) have revealed various factors that determine the women empowerment in Pakistan including, demographic, socio-economic, familial and information-exposure. They have employed demographic and health survey. It suggests restricting girl-child marriage which ultimately adversely affect women empowerment and target actions to upgrade rural women. A recent study Chompa (2022) has conceptually explained women empowerment as an increase in her control over resources and her decision-making capacity. The author has observed community level processes where collective human and economic resources improve women voices and management capability and cause her political empowerment with the sense of ownership. Whereas at individual level process with addition of familial resources a women can improve her own and children's health with increased freedom in household decisions. In their study (Nath & Das, 2024) has considered social indicators as a major contributor in women life. Although literature has provided the variety of factors and reasons responsible for women empowerment. But hardly any study has compared the factors across various dimensions with respect to developed and developing countries context. One of the reasons is that most of the studies related to women empowerment are either primary data based or mostly focus on the overall empowerment needs. Therefore, this study tries to bridge one of the gap by using time series data for two different sets of the countries classified through their development levels respectively.

## 3.    Research Methodology
### 3.1.    The Capability Approach to measure Women Empowerment
Empowerment is the basic component for development. Empowerment concept is different in various development theories. Empowerment role and concept is examined by Capability approach of Amartya Sen. Capability approach is freedom in individuals' quality of life that they are able to achieve. According to the Stanford Encyclopedia of Philosophy[4]

*"The capability approach changes the focus from means (the resources people have and the public goods they can access) to ends (what they are able to do and be with those*

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[4] https://plato.stanford.edu/entries/capability-approach/

*resources and goods). This shift in focus is justified because resources and goods alone do not ensure that people are able to convert them into actual doings and beings. Two persons with similar sets of goods and resources may nevertheless be able to achieve very different ends depending on their circumstances".*

A recent study conducted by Nath and Das (2024) has applied the capability approach by collecting primary data and observed that asset ownership and financial literacy are prime factors in addition to some other social indicators in women life. The strategy suggested by UN-Women report (Women, 2024, February) *"The strategy is informed by an evidence-driven analysis of (i) a global context that requires new ways of thinking about economic empowerment to realize women's human rights and economic autonomy, (ii) UN Women's institutional capabilities and comparative advantages, and (iii) the strategic position of UN Women vis-a-vis its triple mandate and financial and human resources."* Identifying the importance of economic dimension to ensure women empowerment.

Amartya Sen has explored that Quality of life analyzed by two main concept functioning and capabilities. Functioning refers to being and doing something in life and capabilities refer to valuable functions like literacy, health and political freedom that a person has access to in life. The difference between capabilities and functioning is like the difference between opportunity and outcome. Real freedom of a person is a capability to achieve the function. Capability approach covers all dimensions of life like social, political, economic and individual social well-being.

Sen established the connection between capabilities that enhanced the female empowerment agencies. Capability approach shapes the evaluation of Human Development index. It also differentiate the needs and preferences due to gender differences and consider household oriented assessment of wellbeing rather individual one (Klasen, 2020; Sen, 1990, 1993). Nussbaum has criticized and extended the Sen Capability approach that there should be explained that which capabilities are important for gender justice. She argued that the concept of freedom should be more specified. She gives the list of ten capabilities such as life, bodily health, bodily integrity, senses, imagination and thought, emotion, practical reason, affiliation, other species, play and control on environment. Nussbaum capability approach is focused on human dignity (Nussbaum, 2011). Kabeer has explored that empowerment is the process to gain power and it is an ability to make strategic choices in life and for women some of these choices are choosing a life partner, number of children and better living standard. These powers can be generated by three dimensions resources, agency and achievement. Agency is the ability to use the resources for generating new opportunities and achievements is the results of all the process (Kabeer, 2012). In another study Robeyns (2003) has used capability approach to study gender inequality. She further described the list of capabilities and explained the method for selecting them. Some of the capabilities she used in her list are education and knowledge, health and well-being, domestic work and nonmarket care, mobility, being respected and treated with dignity, political empowerment, social relation and religion to study gender inequality in western societies. She evaluated different capabilities by weighing them. Her analysis shows women are worse off than men in many dimensions and better off only in some dimensions. In his research thesis (Keleher, 2007) described in his research the comparison of the capability approach and economic growth. He shows the differences, similarities, strengths and weaknesses between two approaches. He explored that capability approach is more superiorly described the empowerment (freedom of values) than economic growth approach. Sen's capability approach not only means economic development but also human development. According to Amartya Sen the key indicators for development are multidimensional like Human development index, Gender empowerment index, Human poverty index and gender development index while economic growth approach used the Gross national product as main indicator. Keleher described that Capability approach and economic growth approach both show the different correlation between health, education and income. He also explored that empowerment concept in capability approach of Nussbaum and Amartya Sen are not much different (Sen, 1993).

In this study the capability approach has been followed to develop the women empowerment index (WEI) by considering two main dimensions: social and economic. The social dimension further contains two sub-dimensions: health and education as well.

## 4. Research Design
### 4.1. Estimation Technique

First based on three important dimensions of life a simple women empowerment index has been developed. This index is then compared with '*Women Political Empowerment Index'*. Second, both of the indices are further analyzed based on panel cointegration for the two sets of thirty-four countries classified as developed and developing with the purpose to observe the potential role of significant dimensions in case of each set of countries.

**Table 1 : Variables and Their Definition with Source of Data**

| Variables Indicators | Definition | Sources |
|---|---|---|
| Female Primary School Enrollment | It is the ratio of total enrollment that officially corresponds to primary level of education. | UNESCO |
| Female Secondary School Enrollment | It is the ratio of total enrollment that corresponds to secondary level of education after completion of primary education. | UNESCO |
| Female Tertiary School Enrollment | It is the ratio of female total enrollment that corresponds to tertiary level of education after completion of secondary education. | UNESCO |
| Female Life Expectancy at Birth | It is the new born infant that would survive. | WDI |
| Female Survival to Age 65 | It defines as new born baby girl who would survive to age 65. | WDI |
| Female Birth Per Male Birth | It defines as sex ratio at birth that prefers female birth per male birth. | WDI |
| Maternal Mortality Rate | It is the rate of female death per 100,000 live births because of their issues in pregnancy. | WDI |
| Female Labor Force Participation Rate | It is the female population that are economically active, and age is 15 or above. | ILOSTAT |
| Female Wage and Salaried Workers | It is the female worker who consider as paid employ in a country. | WDI |
| Female own Account Workers | Own account female workers are contributing family workers who hold self-employment jobs. | WDI |
| Women Empowerment Index | It is index designed to measure the women power in all social, economic and political sphere of life. | Author's Creation |
| GDP (Per Capita Growth) | It is the annual percentage growth in an economy (GDP per capita) based on the current local currency. | WDI |
| Services Value Added (% of GDP) | 50% of total has been considered the contribution of women[5] | WDI |

UNESCO: United Nation Educational, Scientific and Cultural Organization; ILOSTAT: International Labor Organization (Department of Statistics); WDI: World Development Indicators
Source: Author's Work

### 4.2. Data and Sample Specification

The data sources are mentioned in table A1. A sample consist of total 70 countries comprising both developed and developing ones. The list of countries is given in table A2. The selection of countries has been based on ranking of Human Development Report if high ranked included in developed countries set, whereas developing countries set is based on medium and low ranked. The period of study covers from 1990 to 2023, because Women Empowerment has become the focus for development since 1990s onwards. Whereas the data related to women political empowerment index has been obtained through the 'Our World in Data'[6].

**Table 2: Dimensions for Women Empowerment Index: Description of the Variables**

| Dimension | Index | Indicator |
|---|---|---|
| Socio-Economic Empowerment (WEI) | Education (EDI) | Primary School enrollment of female (PSE) |
| | | Secondary School enrollment of female (SSE) |
| | | School enrollment, tertiary, female (TSE) |
| | Health (HI) | Life expectancy at birth, female (LE) |
| | | Female Survival Rate (FSR) |
| | | Maternal Mortality Ratio (MMR) / Rate (MR) |
| | | Total Fertility Rate (TFR) |
| | | Female birth per male birth (FB) |
| | Economic | Labor Force Participation for age 15 to 24, female (LFP) |

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[5] Lipowiecka, J., & Kiriti-Nganga, T. (2016). *The Gender Dimensions of Services*.
[6] https://ourworldindata.org/grapher/women-political-empowerment-index

| | (EI) | Services value added (SVA) |
| | | Wage and salaried workers, female (WSW) |
| | | Own account workers, female (OAW)/ Contributing Female Family Worker (CFW) |
| | Social Participation (SP) | Women proportion of seats in national parliament (WSP) |
| Political Empowerment (WPEI) | Political Factors based on V-Dem | Women Political Empowerment Index (WPEI) |

Note: Reference for V-Dem institute: https://v-dem.net/media/publications/policy_brief_4.pdf
Source: Author's Work

### 4.3. Index Formulation

Although there are many indicators through which empowerment can be measured, only thirteen indicators have been selected so that all selected countries would be the part of this index. These are the steps to measure the women empowerment index.

i.     categories set of indicators for each subindex (see table 1)
ii.     subindices are calculated by taking the weighted sum of all indicators by assigning the equal weights to each indicator.  The mean value of each indicator is considered as base (=100) values.
iii.     The final index is the weighted sum of all sub-indices.

### 3.4. Model Specifications

Since indices provide a broader perspective regarding the indicators they contained. However, a detail impact of each indicator may also be helpful to observe whether developed and developing countries are significantly different from each other at women empowerment front or not. Because it is assumed that there is a remarkable difference between these groups of countries and some of the aspects are very poor in developing countries compared to developed ones, hence those aspects where developing countries need to improve to enhance women empowerment, should effectively be disclosed. Consequently, both samples of developed countries and developing countries have been regressed by using  fixed effect panel data estimation technique. To further validate the results a panel cointegration technique allowed to observe the long run and short linkage of selected indicators with the respective women empowerment indices. WEI measured in this sturdy has further been compared with WEPI  to evaluate how educational and economic needs  reflect the women empowerment across both sets of countries. As education improves the decision-making power as well as confidence in social life whereas economic independence  increase the empowerment through better financial decisions in her economic life. Following these considerations the model is given as:

$$W(P)EI_{it} = \beta_{0it} + \beta_1 \sum_{t=1}^{n} \sum_{i}^{m} (PSE)_{it} + \beta_2 \sum_{t=1}^{n} \sum_{i}^{m} (SSE)_{it} + \beta_3 \sum_{t=1}^{n} \sum_{i}^{m} (TSE)_{it} + \beta_4 \sum_{t=1}^{n} \sum_{i}^{m} (LE)_{it}$$

$$+ \beta_5 \sum_{t=1}^{n} \sum_{i}^{m} (FSR)_{it} + \beta_6 \sum_{t=1}^{n} \sum_{i}^{m} (MMR)_{it} + \beta_7 \sum_{t=1}^{n} \sum_{i}^{m} (TFR)_{it} + \beta_8 \sum_{t=1}^{n} \sum_{i}^{m} (FB)_{it}$$

$$+ +\beta_9 \sum_{t=1}^{n} \sum_{i}^{m} (LFP)_{it} + \beta_{10} \sum_{t=1}^{n} \sum_{i}^{m} (WSW)_{it} + \beta_{111} \sum_{t=1}^{n} \sum_{i}^{m} (OAW)_{it}$$

$$+ \beta_{12} \sum_{t=1}^{n} \sum_{i}^{m} (SVA)_{it} + \beta_{13} \sum_{t=1}^{n} \sum_{i}^{m} (WSP)_{it} + \beta_{14} \sum_{t=1}^{n} \sum_{i}^{m} (W(P)EI)_{it-1} + \varepsilon_{it} \quad (1)$$

Where WEI represents women empowerment index constructed here and WPEI is already established index based on various political dimensions. This comparison further reveals whether women empowerment is high in terms of socio-economic context measured by WEI or in terms of political context quantified through WPEI. There is a positive restriction on $\beta_1$ to $\beta_{13}$ except $\beta_7$ which should be negative. The description of variables has already been mentioned in table1.

$$WPEI_{it} = \gamma_{0it} + \gamma_1 \sum_{t=1}^{n} \sum_{i}^{m} (EDI)_{it} + \gamma_2 \sum_{t=1}^{n} \sum_{i}^{m} (HI)_{it} + \gamma_3 \sum_{t=1}^{n} \sum_{i}^{m} (EI)_{it} + \gamma_4 \sum_{t=1}^{n} \sum_{i}^{m} (SP)_{it} + \epsilon_{it} \quad (2)$$

$$GDPgr_{it} = \alpha_{0it} + \alpha_1 \sum_{t=1}^{n}\sum_{i}^{m}(EDI)_{it} + \alpha_2 \sum_{t=1}^{n}\sum_{i}^{m}(HI)_{it} + \alpha_3 \sum_{t=1}^{n}\sum_{i}^{m}(EI)_{it}$$

$$+ \alpha_4 \sum_{t=1}^{n}\sum_{i}^{m}(SP)_{it} + \alpha_3 \sum_{t=1}^{n}\sum_{i}^{m}(WPEI)_{it} + \vartheta_{it} \dots\dots\dots (3)$$

$$GDPgr_{it} = \delta_{0it} + \delta_1 \sum_{t=1}^{n}\sum_{i}^{m}(WEI)_{it} + \delta_2 \sum_{t=1}^{n}\sum_{i}^{m}(WPEI)_{it} + \mu_{it} \dots\dots\dots (4)$$

The impact of these sub-indices has also been tested for Gross Domestic Product growth rate (GDPgr) to analyses the impact of those indicators contributing significantly to broader context of the economy. There are some restrictions on the coefficients:

a)  If Beta ($\beta i$) in equation (1), $\beta_1, \dots \beta_{13} > 0$, referring that all indicators are consistent with the theoretical foundation of the women empowerment index.
b)  If Lambda ($\gamma_i$) > 0 in equation (2), it means political empowerment depends on socio-economic factors as well.
c)  If Alpha $\alpha_i > 0$ in equation (3), each dimension has positive contribution in the economic growth.
d)  If delta ($\delta i$) in equation (4), $\delta_1 > \delta_2$, the socio-economic factors are dominant in women empowerment then otherwise political factors dominate.

## 5.    Results and Discussion

The results of equation (1) are mentioned in table (2), it is obvious that all the variables are highly significant as well as positive. However, female survival rates the main negative showing that women empowerment reduces in socioeconomic terms when more female babies survive reflecting some compromise on socioeconomic empowerment in the developed countries. This observation is resembling with the outcomes ofSheikh, Meraj and Sadaqat (2015-16). The results support the objective of this study that all the socioeconomic factors are vital to ensure the women empowerment. It has also been observed that political empowerment has negative impact on socioeconomic empowerment in case of developed countries case. In case of developing countries, again all the indicators have been found highly significant referring the importance of these indicators for socioeconomic empowerment. However, in addition to female survival rate, total fertility rate has inverse relationship with socioeconomic empowerment. It means in developing countries women must compromise in socioeconomic context more on health of their babies of either gender.

**Table 3: Results of Fixed Effect Models based on Women Empowerment Index (WEI)**
Method: Panel EGLS (Cross-section weights)
Cross-section weights (PCSE) standard errors & covariance (d.f. corrected)

| DEVELOPED COUNTRIES | | | DEVELOPING COUNTRIES | |
|---|---|---|---|---|
| **Dependent WEI** | | **Proportional weight** | **Dependent WEI** | **Proportional weight** |
| C | 11.36021* | | 29.66555* | |
| PSE | 0.082100* | 4% | 0.083733* | 5% |
| SSE | 0.084508* | 4% | 0.083688* | 5% |
| TSE | 0.085476* | 4% | 0.084190* | 5% |
| LE | 0.120152* | 6% | 0.066432* | 4% |
| FSR | -0.182592* | -9% | -0.286819* | -17% |
| MMR | 0.039619* | 2% | 0.042063* | 3% |
| TFR | 0.640362* | 31% | -0.115592* | -7% |
| FB | -- | | 0.041529* | 2% |
| LFP | 0.055073* | 3% | 0.061837* | 4% |
| WSW | 0.059393* | 3% | 0.061652* | 4% |
| OAW | 0.075954* | 4% | 0.061215* | 4% |
| SVA | 0.107208* | 5% | 0.125024* | 7% |
| WSP | 0.246930* | 12% | 0.250386* | 15% |
| WPEI | -0.325006* | -16% | 0.091188* | 5% |
| GDP | (pc) 9.68E-05* | 0% | (gr) 0.063322* | 4% |
| WEI(-1) | -- | | 0.002310* | 0% |
| AR(1) | 0.862457* | 42% | 1.156173* | 69% |
| AR(2) | 0.109369* | 5% | -0.203689* | -12% |

| | | | | |
|---|---|---|---|---|
| Obs. | 608 | | 386 | |
| DW-stat | 1.991123 | | 2.085475 | |
| Adj_R_sqr | 0.999380 | | 0.999995 | |
| RMSE | 0.175382 | | 0.089904 | |

Significance of variables is represented by '*'
Source: Author's Calculations

Proportionally, the magnitude of positive contribution of total fertility rate in developed countries is the highest and followed by social participation which remains highest in the case of developing countries. The results of equation(2), mentioned in left- two-columns of table (3), show that only education and social participation remain significant in both samples, but education contributes positively to increase women political empowerment in developing countries sample only. As in developed countries due to already very high level of education political empowerment couldn't have any positive role to enhance it but in case of developing countries sample where education is very low it has positive contribution to improve the political empowerment in these countries. In case of equation (3), the results mentioned in right-two-columns of table (3), the impact of health and economic factors remain highly significant in case of both samples, it means GDP growth highly depends on both health and economic factors of countries across the board. Further, social participation is also contributing to growth perspectives of developing countries. As far as the political empowerment is concerned in case of developing countries its impact is significant with lag viz., whatever political strength already women hold leads to increase the GDP growth, but in case of developing countries, only present status of political empowerment causes more growth in GDP.

**Table 4: Results of Fixed Effect Models based on Women Political Empowerment Index and GDP Growth Rate**

**Method: Panel EGLS (Cross-section weights)**
**Cross-section weights (PCSE) standard errors & covariance (d.f. corrected)**

| | Developed Countries | Developing Countries | Developed Countries | Developing Countries |
|---|---|---|---|---|
| | Dependent : WPEI | | Dependent : GDP Growth Rate | |
| C | 0.088298* | 0.066277* | -103.8257* | -53.05412* |
| EDI | -4.15E-05* | 0.000101* | 0.014745 | 0.001208 |
| HI | 9.96E-05 | 3.04E-05 | 0.140389* | -0.027214* |
| EI | -0.000148 | 4.07E-06 | 2.918521* | 1.995790* |
| SP | 7.63E-05* | 0.000307* | 0.022501 | 0.139243* |
| WPEI | -- | -- | -0.788304 | 6.342389* |
| WPEI(-1) | 0.897164* | 0.881705* | -- | -- |
| AR(1) | -- | -- | 0.816432* | 0.529875* |
| AR(2) | -- | -- | -0.010387 | 0.153111* |
| | | | | |
| Obs. | 873 | 801 | 799 | 698 |
| DW-stat | 2.134334 | 1.974089 | 1.975500 | 1.861699 |
| Adj_R_sqr | 0.989706 | 0.973393 | 0.763124 | 0.662003 |
| RMSE | 0.037483 | 0.030688 | 1.876320 | 2.686864 |

Significance of variables is represented by '*'
Source: Author's Calculations

The results of equation(4), are given in table (4), identify that both types of empowerments are significantly affect the GDP growth rate however, both are positively in case of developing countries but the digression from the expectation because the magnitude of political empowerment is multiple time larger than economic empowerment in case of developing countries.

It means more the political empowerment in developing countries, the more the GDP growth they will experience. In contrast, the developed countries scenario is quite different, economic empowerment of women is the positive contributor in GDP growth, but political empowerment has inverse impact on the GDP growth rate, it may reflect that when in developed countries women become more politically empowered they reduced the contribution in economic terms but in developing countries their empowerment is manifested through their economic contribution.

**Table 5: Results of Fixed Effect Models based on GDP Growth Rate**

| Method: Panel EGLS (Cross-section weights) | | |
| --- | --- | --- |
| Cross-section weights (PCSE) standard errors & covariance (d.f. corrected) | | |
| Dependent : GDP Growth Rate | | |
| | **Developed Countries** | **Developing Countries** |
| C | 7.582416* | -2.673801* |
| WEI | 0.137157* | 0.068655* |
| WEI(-1) | -0.206269* | |
| WPEI | -0.872748 | 3.336762* |
| WPEI(-1) | -0.766454 | |
| GDPGR(-1) | 0.115489* | 0.196749* |
| | | |
| Obs. | 841 | 801 |
| DW-stat | 1.995125 | 1.925329 |
| Adj_R_sqr | 0.250076 | 0.262113 |
| RMSE | 2.808628 | 4.226590 |
| Source: Author's Calculations | | |

## 5.1. Main Findings

The major findings based on the analysis of results are:

First, women get more empowerment through economic factors such as having ownership of their own bank accounts, increased participation in labor force, increase in wages and social factors including increase in education, improvement in life expectancy and more opportunities for social interaction through political system. However, their socioeconomic empowerment compromises when they become mothers and take care of their babies to ensure their survival, and this happens irrespective of developed or developing countries. This finding is in line with Robeyns (2003). Second, in developing countries contribution of educational access has been one of the major contributors of women socioeconomic empowerment but no such impact is found in the developed countries as access to education is free and complementary in these countries. This has been supported by Keleher (2007) and (Adekunle, Kutu, & Alori, 2021). Third, political empowerment has been found to be a major determinant of growth in gross domestic product in the developing countries as in line with (Duflo, 2012). However, economic factors are more important in the case of developed countries. The later has already been approved by both Bhoganadam, Malini and Rao (2014) and Chompa (2022). Fourth, unexpectedly in terms of the impact on gross domestic product political empowerment outperforms the socio-economic empowerment in the developing countries in contrast to developed countries.

## 6. Conclusion and Recommendations

This study attempts to compare the role of socioeconomic factor with the role of political factors within the context of women empowerment. The data collected from both developed and developing countries thirty-five each, however, one country in each group is skipped due to non-availability of data. An index of women empowerment has been constructed based on annual data from 1990 to 2023 considering the social and economic factors which are the main elements of the capability approach. Whereas for the political empowerment, women political empowerment index developed by V-Dem has been used to compare developed and developing countries samples. It can be concluded that based on individual indicators, all socio-economic factors are essentially improved in the developing countries to empower their women population. Educational access, life expectancy and group of political factors must be developed as a broader perspective in the developing countries if these countries are serious about achieving the MDG targets for women empowerment within a given time frame. Although the results for developed countries are not very different, however, in most of the cases the political factors are not found relevant to increase the women empowerment in the developed countries, which reflects that perhaps women have already politically empowered, and focus should be more on their health and economic support if these countries further improve the level of empowerment amongst the women living these countries. The capability approach has been focused on in this study where education, health and economic factors are the mainly focused. Generally, it is evident through results that all these components determining capability are equally relevant both for developed and developing countries and proved significant as well. But due to poor economic situation in developing countries, the economic factors could not play any significant role to contribute advancing the women empowerment.

## 6.1. Policy Guidelines

The findings suggest that developing countries need to advance the socio-economic factors to empower their women population such as increased educational access, raising the level of life expectancy and provide opportunities for political role whereas developed countries should focus on expansion in economic opportunities and health facilities for women to ensure the women empowerment effectively. Hence the set of policies needed in case of developing countries should focus more on social empowerment whereas developed countries focus more on economic empowerment.

## 6.2. Future Research Perspective

Since this study has evaluated a brief context of the women empowerment based on socioeconomic and political factors because of the limited scope of data availability but when more data is accessible in the future then there is need to incorporate the legal, cultural and technological aspects as well to develop a more comprehensive and state of the art women empowerment index.

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**Table 6: Summary of the Various Indices Used to Measure Women Empowerment**

| Indexes | Measures | Authors/Organization |
|---|---|---|
| Gender Development Index (1995) | Health, Education and income in gender aspects | United Nation Development program |
| Gender Empowerment Measurement (1995) | (To measure empowerment) Women Economic income, participation in economic power and representation in politics | UNDP |
| Gender Inequality Index (2010) | 3 dimensions: 1. Health, Empowerment and Labor Market 2. If the value of Gender inequality high means there is high discrimination among male and female 3. This discrimination leads to decrease in women capabilities and freedom of choice | UNDP |
| Gender Global Gap Index (2006) | The gap between gender on economic opportunities, economic participation, health and well-being, Education and political empowerment | World Economic Forum |
| Women's Empowerment In Agriculture Index (2013) | Two sub-indices: five domains of empowerment and Gender parity Index are introduced. In 5 domains: decision about agriculture production and productive resources, control use of income, community leadership and allocation of time are included while in gender parity index percentage of women who are empowered are included. | Alkire for International Food Policy Research Institute |

Source: Author's Calculations

**Figure 3: Residuals Developed Countries Sample**
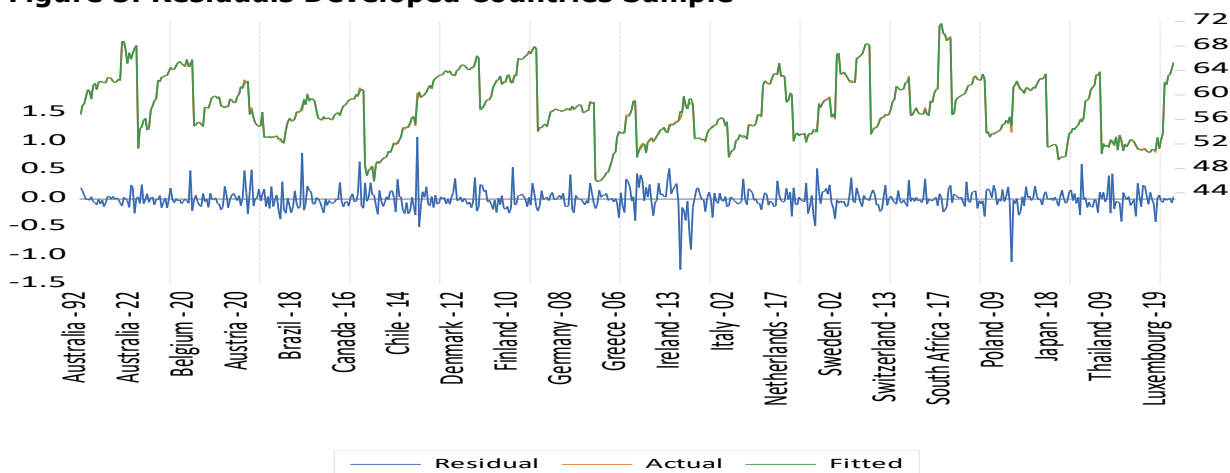


**Figure 4: Residuals Developing Countries Sample**
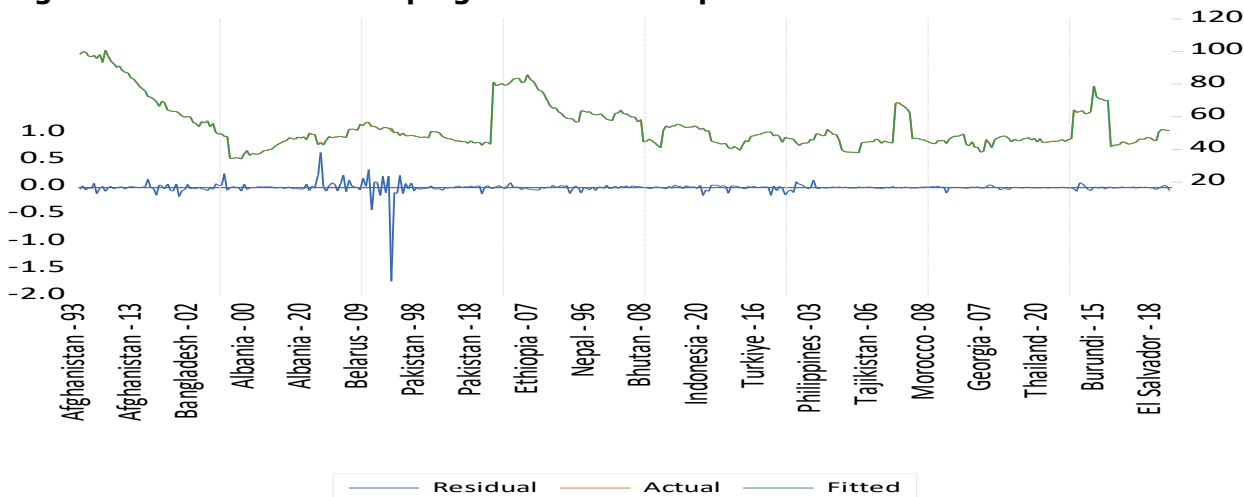
**Table 7: List of Countries Selected as Samples with their respective Cross-Section Effect**

| DEVELOPED COUNTRY_NAME | Cross-Section Effect | DEVELOPING COUNTRY_NAME | Cross-Section Effect |
|---|---|---|---|
| Australia | -1.829201 | Afghanistan | -0.547410 |
| Belgium | 0.253198 | Bangladesh | -0.194300 |
| Austria | -0.773065 | Albania | 0.435658 |
| Brazil | 6.873497 | Belarus | -0.281476 |
| Canada | 0.877671 | Pakistan | -0.757857 |
| Chile | 3.294490 | Ethiopia | 0.009483 |
| Denmark | -2.363685 | Nepal | -0.255603 |
| Finland | 0.183695 | Bhutan | 0.108611 |
| Germany | -0.233944 | Indonesia | -0.010651 |
| Greece | 2.541701 | India | -0.148602 |
| Ireland | -7.581282 | Turkiye | 0.383488 |
| Israel | -1.165478 | Ukraine | 0.408406 |
| Italy | 1.609705 | Philippines | 0.117664 |
| Netherlands | -1.399482 | Sri Lanka | 0.635885 |
| Portugal | -1.828896 | Tajikistan | 0.264506 |
| Saudi Arabia | 4.109487 | Madagascar | 0.179180 |
| Slovenia | -0.572712 | Morocco | 0.178556 |
| Sweden | -2.080781 | Paraguay | 0.015751 |
| Switzerland | -5.212845 | Algeria | 0.510220 |
| United States | -1.597313 | Egypt, Arab Rep. | -0.171015 |
| United Kingdom | -0.948426 | Georgia | 0.426844 |
| South Africa | -1.982565 | Thailand | 0.478427 |
| Spain | 1.286137 | Tunisia | 0.419171 |
| Poland | -0.180256 | Uganda | -0.656843 |
| Norway | -4.129130 | Botswana | 0.616176 |
| Japan | 0.175438 | Burundi | 0.341461 |
| China | 1.661811 | El Salvador | 0.360743 |
| Mexico | 8.192413 | Ghana | -0.265117 |
| Thailand | 1.429368 | | |
| Hungary | 1.960625 | | |
| Luxembourg | -3.990675 | | |
| New Zealand | 0.022678 | | |

NB: Countries are considered developed and developing on the basis of ranking in HDI
Source: Author's Calculations