

Role of ICT in Saudi women empowerment and their participation in labor market

 Mohd Naved Khan¹,  Ghazala Aziz²,  Mohammad Asif^{3*}

^{1,2,3}College of Administrative and Financial Science Saudi Electronic University Riyadh 11673 Saudia Arabia.

m.naved@seu.edu.sa (M.N.K.) g.aziz@seu.edu.sa (G.A.) masif@seu.edu.sa (M.A.)

Abstract: The objective of this empirical study is to evaluate the extent of economic empowerment in Saudi Arabia and examine the impact of information and communication technologies (ICTs) on women's empowerment and their participation in the labor market. This study also aims to evaluate the level of economic empowerment among Saudi women and explore how it can drive economic development and contribute to the 2030 vision. Additionally, it will identify the barriers and challenges Saudi women face in economic empowerment and propose realistic solutions. The research design for the study is based on primary data. The opinions for the study are collected through a survey form, and the respondents are women from Saudi Arabia. The study will sample approximately 400 women respondents from various organizations. The results of the study clearly show that, in the present context, women in Saudi Arabia are much more empowered compared to previous decades. The roles of ICT support women in creating their own respective worlds where they are proving themselves as skilled labor. In the present scenario, with the help of ICT tools and technology, women in Saudi Arabia lead in the labor market and play a crucial role in the economy and welfare as well.

Keywords: Development, Economic, ICT, Labor market, Saudi, Women Empowerment.

1. Introduction

Women are the productive capacity of society. Therefore, it is essential to activate their economic participation for sustainable development of the economy as well as families. Saudi women's economic empowerment can be used to determine if they are able to achieve the 2030 vision in all areas of society, as well as a prosperous economy and a strong homeland. This study will attempt to identify the level of economic empowerment among Saudi women and how it can help economic development and contribute towards the 2030 vision [1]. It will also identify the barriers and problems faced by Saudi women in the area of economic empowerment, and we would suggest realistic solutions.

Further, our goal is to assess the level of economic empowerment in Saudi Arabia and examine how information and communications technologies (ICTs) impact women's empowerment as well as their participation in the labor market. The research will identify the obstacles to economic empowerment and offer solutions. Regression, instrumental variables, propensity match matching, and other econometric methods would be used. A sample of approximately respondents would be taken, including Female faculty members and other women employees from different organizations.

1.1. Significance of the Study

The key to socio-economic growth and development lies in the labor force participation rate, which measures the availability of labor and the composition of a country's human resources. Analyzing this rate is essential for determining employment policies and developing human resource strategies. Achieving sustainable development goals requires women's involvement in the labor force, as gender

equality and economic independence for women are critical components of these goals. Policymakers can use this analysis to identify factors contributing to the decline in women's labor force participation and create policies to remove these barriers. This study is crucial in supporting women's fundamental right to work and plays a significant role in the development of the Saudi economy.

1.2. The ICT Perspectives

The role of Information and Communications Technology (ICT) is significant in empowering Saudi women and enhancing their participation in the labor market. ICT provides numerous opportunities and tools that can bridge gender gaps and foster an inclusive economic environment. ICT is a powerful tool for empowering Saudi women, facilitating their education, employment, and entrepreneurship, and helping them overcome traditional barriers to economic participation. By leveraging ICT, Saudi Arabia can accelerate progress towards gender equality and a more inclusive labor market, contributing significantly to the nation's socio-economic development.



Figure 1.
The ICT perspective.

1. **Access to Education and Training:** ICT enables Saudi women to access online education and professional training programs, enhancing their skills and qualifications. This accessibility is crucial for personal development and competitiveness in the job market.
2. **Entrepreneurial Opportunities:** ICT offers platforms for women to start and manage their businesses online. E-commerce and digital marketing tools allow women to reach broader markets, reducing the need for significant initial capital and physical presence.
3. **Flexible Work Arrangements:** With ICT, remote work and flexible job opportunities become more feasible. This flexibility is particularly beneficial for women balancing work with family responsibilities, thereby increasing their labor market participation.
4. **Networking and Mentorship:** ICT facilitates virtual networking and mentorship opportunities, connecting Saudi women with industry leaders, peers, and potential employers globally. These connections can provide support, guidance, and career advancement opportunities.

5. **Access to Information:** ICT ensures that women have access to valuable information about job opportunities, market trends, and economic policies. This access empowers women to make informed decisions about their careers and businesses.
6. **Advocacy and Awareness:** Digital platforms enable the dissemination of information regarding women's rights and gender equality. Advocacy through ICT can influence public opinion and policy changes that support women's empowerment.
7. **Enhancing Productivity and Efficiency:** ICT tools and applications can help women enhance their productivity and efficiency at work. Technological proficiency is often associated with better job performance and career advancement.
8. **Enhancing Productivity and Efficiency:** ICT minimizes the constraints of geographical barriers, allowing women in remote or conservative areas to participate in the economy and access job opportunities without relocating.

2. Review of Literature

Conceptually, education is understood as a process, action, and outcome, all centered on empowerment [2]. It is linked to successful employment opportunities for women [3]. Empowerment is defined, implemented, and appropriated differently across diverse socio-cultural, economic, religious, and political contexts. Monkman [4] argues that development which fails to challenge inequitable social relations, such as gender relations, perpetuates social reproduction rather than fostering social change. Thus, we propose that socio-cultural norms, religious and local customs, and political and economic conditions related to the ongoing empowerment process form an analytical framework for exploring the complexity of empowerment. This framework goes beyond the basic formula of education, work, and empowerment as an outcome, influencing contemporary gender and empowerment policy goals, initiatives, and practices.

Alhawsawi and Jawhar [5] The Saudi 2030 Vision commits to empowering women through education and employment, yet the literature often overlooks their everyday realities. This paper adopts a critical realist perspective to examine the mechanisms arising from the interplay of structural and cultural factors that influence women's empowerment in the context of local realities in Saudi Arabia. As part of a broader study, this research delves into the qualitative aspects of women's work and education experiences by analyzing policy documents and conducting semi-structured interviews. The findings reveal that structural and cultural factors have diverse impacts on education and employment, which may ultimately lead to disempowerment.

Qatar and Oman's 2030 visions emphasize education as the key to achieving gender equality and female empowerment. Currently, 54.9% of women in Qatar are enrolled in higher education, and 57.9% participate in the labor force. However, only 15.1% hold managerial and senior official positions. These statistics highlight the close connection between female education and labor market participation in the Arab Gulf [6].

The Saudi Vision 2030 reflects the government's dedication to empowering Saudi women, who historically faced marginalization due to ultra-conservative traditions and social norms. Traditionally, the Saudi government prohibited women from sharing workspaces with men, reinforcing social constructs that confined women to roles as "nurturing mothers" and "good housewives" [7].

Ibrahem, et al. [8] This paper explores the empowerment of Saudi Arabian women through the Internet of Things (IoT) in the management technology sector. The study focuses on how IoT can enhance women's skills and capabilities within the framework of digital transformation, thereby increasing their opportunities for sustainable employment. It also measures the participation rates of women in management technology. The primary objective is to examine the impact of women's empowerment on social, economic, political, and managerial dimensions, sparking a new era of practical discourse on women's empowerment in Saudi Arabia. The investigation revealed that political empowerment positively affects managerial and economic empowerment, while its impact on social empowerment is insignificant.

Nikulin [9] It is widely argued that ICTs facilitate the inclusion of low-skilled and traditionally marginalized groups—such as women, people with disabilities, and workers at the base of the pyramid (BoP)—into the labor market. This paper investigates the determinants of female labor market participation in developing countries, with a particular focus on the impact of ICT usage. We conduct a panel study analysis for 60 developing countries from 2000 to 2014. Our findings confirm a positive impact of ICT use on female labor force participation in these countries. Additionally, we demonstrate that gross national income (GNI) per capita, fertility rates, and income inequalities also influence the level of women's engagement in the labor market. Our results remain robust across various control variables and different ICT proxies.

Tawfik, et al. [10] Women represent the productive capacity of society, and their economic participation is essential for the sustainable development of both the economy and families. This study aimed to assess the level of economic empowerment of Saudi women, identify the barriers they face, and propose solutions to overcome these obstacles. A strategy was formulated to enhance the economic empowerment of Saudi women. Using a descriptive analytical method, the research included a sample of 509 individuals, comprising faculty members, leaders, and other university employees. The findings indicated that respondents perceived the indicators for the economic empowerment of Saudi women as acceptable. The research concluded that there were no statistically significant differences in respondents' opinions regarding the level of empowerment of Saudi women. Based on these results, we propose strategies to improve the economic empowerment of Saudi women, with the key recommendation being to expand women's participation in both public and private institutions.

Economic women's empowerment refers to expanding economic opportunities and changing societal trends for women. This involves creating a flexible working environment to help women manage job and family responsibilities, encouraging women's participation in various fields, and enacting legislation that promotes women's economic involvement [11].

To advance this region, it is crucial for women to possess the skills and capabilities to secure employment, exercise their rights, and engage in politics [12]. The UNDP [13] conducted a study to measure women's participation in the Iraqi economy, examining how beneficiaries responded to different aspects of women's economic empowerment. The study made several recommendations to Iraqi lawmakers, emphasizing the need for a legal framework that supports women's economic empowerment, with a focus on aiding disadvantaged women.

Al-Khalifa [14] investigated the economic strategies of Bahraini women and found significant progress in global rankings of women's economic indicators. Bahrain leads the Gulf region in equal pay for men and women. Bahraini women have excelled in various fields, including retail, financial services, and real estate. Mohamed [15] conducted ethnographic research in Juhayna, Egypt's Sohag Governorate, to explore the economic and social empowerment of educated, unemployed women. The findings revealed that these women improved their financial income, social status, and reduced poverty levels.

Al-Thaqafi [1] Focused on women entrepreneurs in Saudi Arabia's eastern region, using qualitative and field survey methodologies. The study found that Saudi women have significantly contributed to the Kingdom's progress over the years. Education emerged as a critical factor in boosting women's confidence and transforming societal perceptions. Youssef [16] examined the roles of Saudi women in Al-Kharj Governorate, using a quantitative descriptive method. The study highlighted various employment opportunities for Saudi women, including teaching, medicine, administration, and technical fields. However, it also identified obstacles, such as a lack of affordable, high-quality childcare centers, hindering women from fulfilling both work and family roles.

In 2018, the World Bank conducted a study to identify policies that could enhance economic growth and reduce the gender gap in Egypt. The study provided a strategy for Egypt's National Council for Women's Economic Empowerment, pinpointing areas where gender inequalities persist and recommending economic policies to address these issues. Shuqair [17] carried out an applied study in Qassim to identify factors that could increase Saudi women's leadership roles. The study, which utilized

a questionnaire to gather descriptive data, revealed that cultural norms and social constraints still limit women's business activities in Qassim. Factors such as financial illiteracy, poor budgeting practices, lack of strategic goals, and inadequate support environments contribute to the failure of small initiatives. To boost Saudi women's economic participation, collaboration among various groups is essential.

Kabeer [18] From the International Center for International Development Research in the UK, focused on women's economic empowerment through employment. Using analytical and descriptive methods, the research compiled data from multiple studies, showing that gender equality can significantly enhance economic growth, reduce disparities in education and employment, and improve family well-being.

Findlow [19] Asserts that higher education in the Arab Gulf region influences gender and feminist awareness by both enabling and hindering female empowerment. Women's personal experiences reveal a growing tension between family care responsibilities and labor market participation, driven by individual economic and political efforts to address gender equality shortfalls. The collective voice of women in the Arab Gulf emphasizes that higher education and greater workforce participation are top priorities for female empowerment.

3. Objectives

- To know the degree and outline of women empowerment and its influence on labor participation.
- To recognize and elucidate demographic and socio-economic factors responsible for the changing patterns of women empowerment and labor force participation rate.
- To assess the impact of information and communication technologies on women empowerment in Saudi Arabia.

3.1. Research Design and Methodology

The research design for the study is comprises various parameters, as the study is based on the primary data. The opinions for the study are collected through the survey form, respondents are women of Saudi. The landscape of the research methodology is as follows:

3.2. Target Population

The sampling unit will be women members of the household between 15 and 65 years in different universities and other different organizations. The final figure of the respondents is 400 for the data analysis.

3.3. Data Collection

The data collection for the study is committed in the primary data category. For this, the survey form is designed with two sections. The first section of the survey form is dedicated for Demographic data and second section comprises 16 focused questions on the research topic.

In order to address the various objectives, primary-level data would be used for the analysis. A structured questionnaire will be designed to collect information. The questionnaires are designed in English language. The survey questionnaire would contain two sections. Section A, mainly related to the background and demographic descriptors, obtains socio-demographic information from the respondents. Section B is primarily associated with women respondents' education status, employment status, and other socio-economic factors related to work participation and loss of work. The questions are based on the objectives made for the study. Similarly questions are taken as the variable to satisfy the projected study.

3.4. Data Collection Scale

In line with the study's objectives, the opinions of a minimum of 400 individuals will be gathered through a survey and analyzed based on predefined hypotheses. Data collection will employ a 5-Point

Likert scale, a widely used method in survey research for assessing attitudes, opinions, or perceptions. This scale offers respondents a spectrum of response choices to articulate their degree of agreement or disagreement with statements:

Strongly disagree (1): Signifies a robust disagreement or minimal agreement with the statement, indicating strong opposition or disagreement from the respondent.

Disagree (2): Reflects a moderate level of disagreement, suggesting negative sentiment without strong opposition.

Neutral (3): Represents a neutral standpoint, where the respondent neither agrees nor disagrees, serving as a baseline for neutrality.

Agree (4): Indicates a moderate level of agreement, where the respondent favors the statement but not emphatically.

Strongly Agree (5): Expresses strong agreement or high alignment with the statement, demonstrating strong support or agreement from the respondent.

3.5. Hypothesis

The study covers a wide-ranging domain with numerous applications of a specific technology. Therefore, it is imperative to assess it through multiple hypotheses. Subsequently, the outcomes will be synthesized to draw comprehensive conclusions that address the underlying assumptions.

H₁: There is significant relationship between women labor empowerment and society development.

H₂: Women empowerment play significant role to straighten the economy of the society.

H₃: This is significant that educated women will earn similar to equally qualified male as well as work in limited area also.

H₄: ICT is plays significant role in the women empowerment with technological advancements.

H₅: ICT plays significant role in generation of household income and make women economically sound.

H₆: ICT provides enough job skill and self-confidence to connect women with larger industries.

H₇: ICT and social media plays significant role to provide job related opportunity and raise women rights.

3.6. Data Analysis

The data analysis will encompass various components, including demographic data analysis, close-loop data analysis, and hypothesis analysis. Given the breadth of the subject, seven hypotheses will be formulated to derive the final conclusions. In which 04 hypothesis is directly associated with ICT development and 03 are dedicated to the women empowerment. Statistical tests such as the z-test, ANOVA, and Regression analysis will be employed based on the nature of the data and the hypotheses being tested.

3.7. Demographic Data Analysis

Qualification: According the data received about the educational qualification of the respondents women it is found that 34% women are Graduate, 26% are having Post Graduate degree, 26% are having technical diploma, 03% are having professional certificate in specific domain and 11% women are possessing Doctorate degree. This shows that women are much qualified.

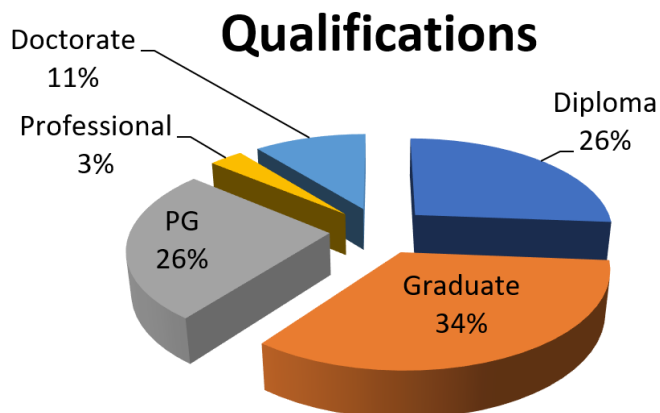


Figure 2.
Women's Qualifications.

Age Group: According the data received about the Age of the respondents women, which is displayed by the respective age groups. it is found that 22% women are of age group 18-25 year, 53% women are of age group 26-35 year, 16% women are of age group 36-45 year, and 09% women are of age group 46-55 year. This shows that women are much mature.

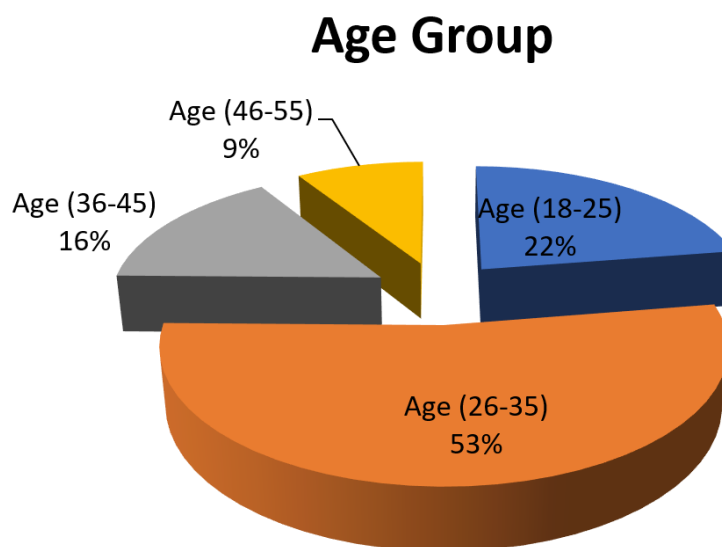


Figure 3.
Women's Age Group.

Work Experience: According the data received about the work experience of the respondent women, which is displayed by the three clusters / years. It is found that 69% women are having up to 05 years of working experience, 24% women are having up to 10 years of working experience and 07% women are having up to 20 years of working experience This shows that women are having enough working experience with ICT associated domains.

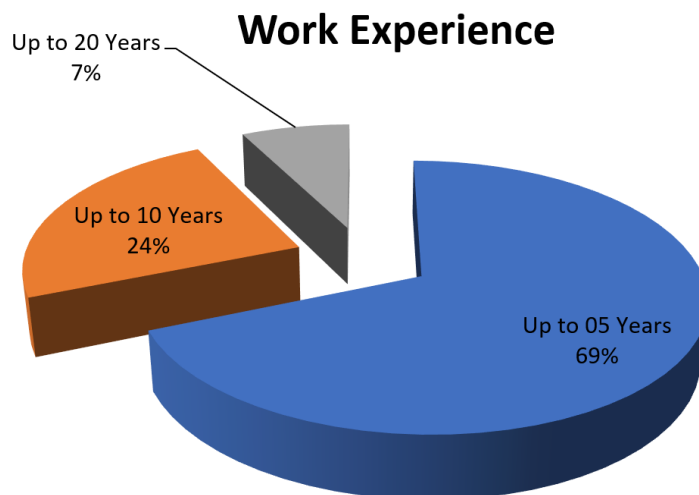


Figure 4.
Women's Work Experience.

Locality: According the data received about the locality of the respondent women, this is displayed by the three clusters. It is found that 70% women are living the Urban locality, 04% women are living the Semi-Urban locality and 26% women are living in the Rural / town locality. This shows that women are experience of diverse locality and facilities with ICT associated domains.

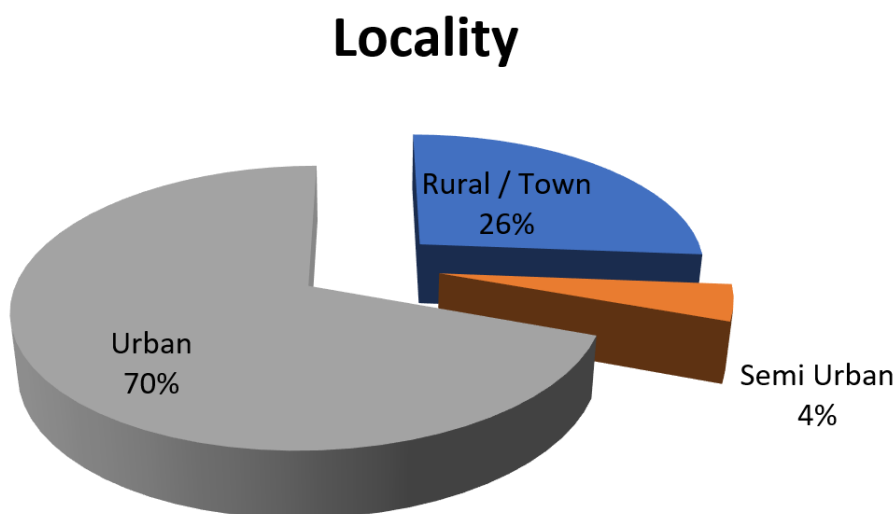


Figure 5.
Women's Locality.

4. Hypothesis Analysis

In this segment we are evaluating supposition on the basis of outlook received from the respondents. The hypothesis productivity provides us a strong view about the factors which are influenced by the by the ICT and women empowerment.

4.1. Analysis of Hypothesis 1

1H0: There is significant relationship between women labor empowerment and society development.

1H1: There is no significant relationship between women labor empowerment and society development.

To evaluate hypothesis-1, we need to gather opinions from respondents regarding the significant relationship between women labor empowerment and society development. For this purpose, we will utilize two specific questions and apply Z-test analysis to determine the significance of them. The opinions gathered through these questions/variables are:

1. Did you believe that women empowerment is directly associated with the development of society.
2. Up to what extent you are agree that empowered women would be better employee / labor in the modern age.

Table 1.

z values for hypothesis-1.

	Variable 1	Variable 2
Mean	4.2675	4.2825
Known Variance	1.178	1.12
Observations	400	400
z	0.1979	
P(Z<=z) one-tail	0.4215	
z Critical one-tail	1.644	

According to the z test value of the hypothesis -1 test it is find that the value of observed of the z is 0.1979 which shows that the observed z value is lesser than critical z values 1.644 for one tail test. Thus we can say that the null hypothesis accepted so we can say that there is significant relationship between women labor empowerment and society development.

4.2. Analysis of Hypothesis-2

2H0: Women empowerment play significant role to straighten the economy of the society.

2H1: Women empowerment play significant role to straighten the economy of the society.

To evaluate hypothesis-2, we need to gather opinions from respondents regarding the women empowerment and its impact in straighten of economy of the society. For this purpose, we will utilize two specific questions and apply Z-test analysis to determine the significance of them. The opinions gathered through these questions/variables are:

1. Up to what extent you are agree that empowered women impacted on the labor participation.
2. Women empowerment is one of the positive sites to straighten the economy of the society.

Table 2.

z values for hypothesis-2.

	Variable 1	Variable 2
Mean	4.227	4.22
Known Variance	1.10	1.18
Observations	400	400
z	0.0993	
P(Z<=z) one-tail	0.460	
z Critical one-tail	1.644	

According to the z test value of the hypothesis-2 test it is find that the value of observed of the z is 0.0993 which shows that the observed z value is lesser than critical z values 1.644 for one tail test. Thus we can say that the null hypothesis accepted so we can say that women empowerment play significant role to straighten the economy of the society.

4.3. Analysis of Hypothesis-3

3H0: This is significant that educated women will earn similar to equally qualified male as well as work in limited area also.

3H1: This is not significant that educated women will earn similar to equally qualified male as well as work in limited area also.

To evaluate hypothesis-3, we need to gather opinions from respondents regarding the women will be work in the limited area as compare to men and women educated woman will earn similar to equally qualified and experienced men. For this purpose, we will utilize two specific questions and apply Z-test analysis to determine the significance of them. The opinions gathered through these questions/variables are:

1. Did you agree that women will be work in the limited area as compare to men.
2. Did you believe that one educated woman will earn similar to equally qualified and experienced men.

Table 3.

z values for hypothesis-3.

	Variable 1	Variable 2
Mean	3.615	3.965
Known Variance	1.32	1.04
Observations	400	400
z		4.56
P(Z<=z) one-tail		2.59
z Critical one-tail		1.644

According to the z test value of the hypothesis-3 test it is find that the value of observed of the z is 4.56 which shows that the observed z value is larger than critical z values 1.644 for one tail test. Thus we can say that the null hypothesis rejected and alternate is accepted so we can say that this is not significant that educated women will earn similar to equally qualified male as well as work in limited area also.

4.4. Analysis of Hypothesis-4

4H0: ICT is plays significant role in the women empowerment with technological advancements.

4H1: ICT is not playing significant role in the women empowerment with technological advancements.

To evaluate Hypothesis-4, we gather respondents' opinions regarding ICT role in the women empowerment with technological advancements. We will focus on three key variables/questions related to ICT empowerment, ICT critical role, and ICT supports women to gaining access to naval knowledge. Subsequently, we will use analysis of variance (ANOVA) to determine the significance of these statements. The opinions collected through these questions/variables are:

1. Up to what extent you are agreeing that ICT empowered women would be better employee / labor in the modern age.
2. Up to what extent you are agree that Information communication technology play crucial role to empower women would be better employee / labor in the modern age.
3. The ICT supports women to gaining access to naval knowledge along with information and awareness

Table 4.
ANOVA for hypothesis-4.

Groups	Count		Sum		Average	Variance
Variable-1	400		1705		4.26	1.05
Variable-2	400		1701		4.25	1.05
Variable-3	400		1692		4.23	1.06
ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	0.222	2.000	0.111	0.105	0.900	3.003
Within Groups	1257.78	1197	1.050773			
Total	1258.00	1199				

According to Table 4 it is observed that the mean values of the opinion for all the variables are almost equal which shows similarity in the opinion for each variable. It is also noted that variances are also showing similarity. As per the result of analysis of variance the observed F value is 0.105 which is lesser than the critical F value, which is 3.003. Thus as per the F value we can say that null hypothesis is accepted and alternate hypothesis is rejected. So conclusion is there that ICT is plays significant role in the women empowerment with technological advancements.

4.5. Analysis of Hypothesis-5

5H0: ICT plays significant role in generation of household income and make women economically sound.

5H1: ICT do not plays significant role in generation of household income and make women economically sound.

To evaluate hypothesis-5, we need to gather opinions from respondents regarding the ICT plays significant role in generation of household income and make women economically sound. For this purpose, we will utilize two specific questions and we are applying regression analysis to find out the correlation between the statements. The opinion collected through the questions / variables are:

1. ICT helps to generate household income and work from home opportunity.
2. ICT education makes women economically sound for improving women empowerment.

Table 5.
Regression value for hypothesis-5.

<i>Regression Statistics</i>	
Multiple R	0.730
R Square	0.533
Adjusted R Square	0.532
Standard Error	0.673
Observations	400

According to the regression test value of the hypothesis-5 test it is finding that the value of multiple R is 0.730 which shows that there is above average strong correlation exists between the variables. Thus we can say that the null hypothesis accepted with above average strong he relation and is strongly connected to each other, although correlation is exists among them. So we will consider that ICT plays significant role in generation of household income and make women economically sound.

4.6. Analysis of Hypothesis-6

6H0: ICT provides enough job skill and self-confidence to connect women with larger industries.

6H1: ICT do not provide enough job skill and self-confidence to connect women with larger industries.

To evaluate Hypothesis-6, we gather respondents' opinions regarding ICT provides enough job skill and self-confidence to connect women with larger industries. We will focus on three key variables/questions related to Self-confidence, Improved job skill, and opportunities to connect with larger industries. Subsequently, we will use analysis of variance (ANOVA) to determine the significance of these statements. The opinions collected through these questions/variables are:

1. The ICT support increases self-confidante and self-esteem.
2. The ICT support improves job skill and work efficiency.
3. ICT provides abilities opportunities to connect with larger industries.

Table 6.
ANOVA for hypothesis-6.

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>		
Variable-1	400	1648	4.120	0.818		
Variable-2	400	1663	4.158	1.115		
Variable-3	400	1681	4.203	0.929		
ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	1.365	2.000	0.683	0.715	0.489	3.003
Within Groups	1141.915	1197.000	0.954			
Total	1143.28	1199				

According to Table 6 it is observed that the mean values of the opinion for all the variables are almost equal which shows similarity in the opinion for each variable. It is also noted that variances are also showing similarity. As per the result of analysis of variance the observed F value is 0.715 which is lesser than the critical F value, which is 3.003. Thus as per the F value we can say that null hypothesis is accepted and alternate hypothesis is rejected. So conclusion is there that ICT provides enough job skill and self-confidence to connect women with larger industries.

4.7. Analysis of Hypothesis-7

7H0: ICT and social media play significant role to provide job related opportunity and raise women rights.

7H1: ICT and social media do not play significant role to provide job related opportunity and raise women rights.

To evaluate hypothesis 7, we need to gather opinions from respondents regarding the ICT and social media not plays significant role to provide job related opportunity and raise women rights. For this purpose, we will utilize two specific questions and we are applying regression analysis to find out the correlation between the statements. The opinion collected through the questions / variables are:

1. Do you agree that ICT helps in participation various job-related activities?
2. Up to what extent you are agree that ICT supports to raise women rights using social media

Table 7.
Regression value for hypothesis-7.

<i>Regression Statistics</i>	
Multiple R	0.679
R Square	0.461
Adjusted R Square	0.460
Standard Error	0.635
Observations	400

According to the regression test value of the hypothesis-7 test it is finding that the value of multiple R is 0.679 which shows that there is above average strong correlation exists between the variables. Thus we can say that the null hypothesis accepted with above average relation and is properly

connected to each other, although correlation is exists among them. So we will consider that ICT and social media plays significant role to provide job related opportunity and raise women rights.

5. Result

As per the conclusions and outcomes received from the data analysis there are seven key factors are taken in the account in the form of hypothesis. These responses are received by the women respondents which are much qualified and having good work experience.

All the major factors in the form of hypothesis are examined with the influence of Role of ICT in Saudi women empowerment and their participation in labor market. From the hypothesis analysis it is found that 05 hypotheses are strongly favoring the research title, 01 hypothesis supports study in average mode and 01 hypothesis do not support the study assumptions.

Table 8.
Outcomes from the Hypothesis.

SN	Factors / Hypothesis	Relation
1	There is significant relationship between women labor empowerment and society development.	Accepted
2	Women empowerment play significant role to straighten the economy of the society.	Accepted
3	This is significant that educated women will earn similar to equally qualified male as well as work in limited area also.	Rejected
4	ICT is plays significant role in the women empowerment with technological advancements	Accepted
5	ICT plays significant role in generation of household income and make women economically sound.	Above Average
6	ICT provides enough job skill and self-confidence to connect women with larger industries.	Accepted
7	ICT and social media plays significant role to provide job related opportunity and raise women rights.	Average

Thus, we can say that ICT plays positive and significant role in Saudi women empowerment and their participation in labor market. It provides positive effect on the women urban quality life and is one of the positive sites for the women of Saudi. Although it is also noted that somewhere gender equality are not consider by the people like salary for equally qualified male and female. Also the some places where female cannot go for job, only male are doing that job. Still from all the perspectives it is found that study supports Saudi women with 80-85% positive results.

6. Conclusion

The result of the study clearly shows that in the present context women of Saudi are much empowered as per the previous decades. The roles of ICT support women to make their own respective world where they are proving themselves as skilled labor. In the present scenario with the help of ICT tools and technology women of Saudi leads on the labor market and play crucial role in the economy and welfare also. All the section of the study and objectives are satisfied after data analysis still we observed that educated women will not earn like equally qualified male and some of the domain where women cannot work which is limited them as women. We think that it will be by natural and is not point of issues. Despite this minor issue almost 90% of the Saudi world is open for the women with support of ICT where they proved their caliber and potential.

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Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Authors' Contributions:

Dr. Mohd Naved Khan, Dr. Mohammad Asif and Dr. Ghazala Aziz: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Writing - original draft; Writing - review & editing

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