ROLE OF WOMEN IN SUSTAINABLE DEVELOPMENT IN JORDAN: THE POST DEVELOPMENT AGENDA

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ABSTRACT

Purpose: *This study aims to examine women's role in Jordan's sustainable development based on their contributions in education, agriculture, workforce, and Global volunteering.*

Design/methodology/approach: *Data were collected from women of varying demographic backgrounds in Jordan. Questionnaires were administered online to 450 women, out of which 326 were received; however, 314 responses were appropriately filled, considered the final sample. The study utilized the Analysis of Moment Structures (AMOS), which is an "IBM SPSS Statistics module." This was necessary to analyze the covariance structure models, including structural equation modeling (SEM).*

Findings: *The results revealed that women's role in education, workforce, and agriculture plays a significant role in Jordan's sustainable development. In contrast, the findings revealed an insignificant impact of women's role in volunteering activities on women's sustainable development roles.*

Practical implication: *It is expected that the findings of this study will provide significant insights to help government and the drivers of the sustainable development goals (SDGs) to plan measures to ensure that the skills of women are fully employed in all sectors of the economy as this would reflect a sense gender equality without which the 2030 SDGs cannot be actualized.*

Originality/value: *This study is one of its kind to examine women's role in sustainable development in Jordan.*

Keywords: Women, Jordan, Sustainable Development, Role, Agriculture, Education, Workforce, Global Volunteering, Structural Equation Modeling (SEM).

INTRODUCTION

The sustainable development concept occupies a crucial position in developing and improving our developed environment's quality (Mensah & Casadevall, 2019). This model becomes a discrete discipline in the late 80s and early 90s. Since then, definitions of the particular content, language, and function of sustainable development continue to evolve (Edwards, 1999; Moughtin & Shirley, 2005; Steele, 1997). Opinions among academics and professionals alike have varied as to constituent rudiment of the field (Crowther, 1992; Hardy & Lloyd, 1994; Pearce, Barbier, & Markandya, 1990; Roberts, 1994). Nevertheless, a definition of the model that is accepted generally was put forward by the World Commission on Environment and Development (Brundtland, 1985) as follows: "sustainable development is a development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs." An extensive agreement seems to exist that providing solutions to challenges is tantamount to adopting some programs and policies that result in sustainable development and has become a familiar tagline in the modern development agenda (Al-Zoabi, 2001; Mensah & Casadevall, 2019). Mensah and Casadevall (2019) Reveal and claim that sustainable development's crux revolves around inter-and intragenerational equity rooted fundamentally on three-dimensional discrete yet intertwined foundations, namely the

environment, economy, and community. In essence, the theory of sustainable development emerged from practice and academic works. In practice, Millennium Development Goals (MDGs) were the global development goals that had been developed by the Summit held in 2000 with aims such as eradicating poverty, promoting universal primary education, promoting gender equality, and female empowerment (Shi, Han, Yang, & Gao, 2019). As noticed, special has been paid to women's empowerment and gender equality to achieve SD goals in the three pillars of sustainable development: social, environment, and economy (Mensah & Casadevall, 2019; Shi et al., 2019).

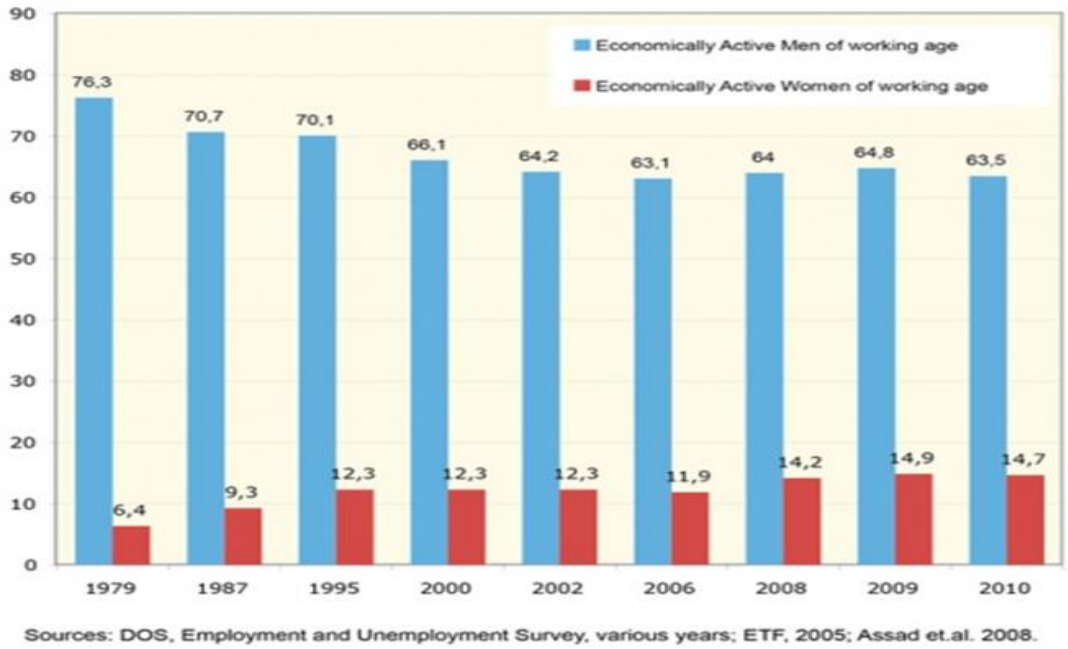
The vital role women play in society has contributed immensely to the progress, stability, total growth, and advancement of nations. Much as society's political and social elements impact the result of developmental interventions and planning, so do the positions and professions of conventional sexes. This growth element has been largely overlooked, and women's future efforts have been underestimated (Tinker, 2007). For instance, women constitute about forty-three percent of the global agricultural workforces worldwide – reaching up to seventy percent in countries. Throughout Africa, for example, small-scale farmers produce about eighty percent of the total agricultural production, and the majority of these small-scale farmers are women dwelling in rural areas (Salvia, Leal Filho, Brandli, & Griebeler, 2019). It is a widely known fact that agriculture can be the driving force of poverty alleviation (Thurlow, Dorosh, & Davis, 2019) and an instrument of growth and development, especially in third-world countries (Van den Broeck & Maertens, 2017). Women, particularly mothers, perform the most considerable function in deciding on the family diet and meal planning. Women also self-report their idea in child health and diet protection more frequently (Gran, 2019).

Further, women perform a vital role in the exploitation, management, preservation, and usage of natural resources, both as educators as well as consumers, even though they are minimal access and control of such resources (Women, 2013). Women dwelling in rural areas is the main producers in agriculture. Thus, they are essential for the food security of any nation. Also, women work more and are paid less; thirty-eight percent do not have personal income (Ortega, 2013).

Further, women in Latin America possess not up to twenty percent of the land. However, Statistics reveal that agricultural production will rise if they were given the same access to land as their male counterparts (G. Sen, 2014). Likewise, free jobs for self-consumption are mostly carried out by women, particularly jobs like fetching water, firewood, etc. 43.7 percent and 61.8 percent of employed rural-dwelling women in and Guatemala Ecuador respectively practice subsistence agricultural production as opposed to 31.7 percent and 47.8 percent of men respectively (CEPAL, 2012).

As a developing country, Jordan is among the countries that still struggle to empower women and achieve gender equality. Women's perspective in driving sustainable development goals and prospects in Jordan is most times less considered due to economic, social, and environmental conditions that confront women and beclouds their potential to create development impact (Singh, 2019). The report of the Center for Women Policy Studies (2013) substantiated the foregoing by highlighting that most women are experiencing increasing levels of poverty, have poor access to proper education, are malnourished, and confronted with series of health conditions that impacts their levels of productivity and drive towards economic development. Moreover, a vast discrepancy exists between women's employment levels and their male counterparts (World Bank, 2018). As such, the opportunity to impact society through productive activities is more prominent in men than women. (See Appendix 1).

APPENDIX 1



Sources: DOS, Employment and Unemployment Survey, various years; ETF, 2005; Assad et.al. 2008.

The Centre for Women Policy Studies report also shows that about 330 million women live on less than one dollar a day. In the Middle East, North Africa, and South Asia, only 40 women per 100 men are economically active in the formal economy (US News Center, 2014). This case is present in Jordan and acts as a serious impediment to women's role towards sustainable development. The Department of Statistics in Jordan (2010) reports that women are more susceptible to unemployment than Jordan men. In 2010, the magnitude of unemployed women was more than twice that of men (Assaad, Hendy, & Yassine, 2014), and in 2015 the report shows that most women under the age of 15-19 and 20-22 are significantly unemployed. This indicates that efforts to promote women's inclusion in sustainable development initiatives are constricted by women's economic, social, and educational status in Jordan (Krafft & Assaad, 2018). However, it is unfortunate that Jordan's current sustainable development practices do not measure up to the required benchmark (Shuqair & Abdel-Aziz, 2015; Singh, 2019). Hence, an evaluation of women's role in attaining sustainable development deserves more attention, as most reports indicate the diminished role in achieving sustainable development in Jordan (SOCIAL WATCH, 2017; World Bank, 2018). Simultaneously, there is a growing interest in quantitative research that measures sustainable development in developing countries, as this measures the level of maturity of these countries' visions and agendas (Biasutti & Frate, 2017). In essence, Jordan is one of the developing countries seeking to know its development programs' status quo (Cervigni & Naber, 2010). One of them is women's role in different areas towards achieving sustainable development (World Bank, 2018). Based on the discussion above and informed by the three pillars of sustainable development, we noticed a paucity of studies that endeavored to fill the literature gap in evaluating and measuring women's role in attaining sustainable development. We argue that studying and evaluating the various pillars of sustainable development generally and women's role particularly can contribute to academia and practice. Thus, this study aims to examine women's roles in attaining sustainable development goals in

Jordan by evaluating the level of women's contributions to sustainable development in four areas: education, agriculture, workforce, and volunteering activities. Specifically, the study will:

- Evaluate how Women's Role in the Educational Sector drives the attainment of sustainable development in Jordan.
- Evaluate the impact of women in the Agricultural Sector Towards realizing sustainable development prospects for Jordan.
- Evaluate the contribution of women in workforce diversification to achieve sustainable development goals.
- Evaluate the impact of women volunteer Services in realizing development targets in Jordan.

Women and the Sustainable Development Goals (SDGs)

Gender equality is a right. However, the greatest opportunity in solving several of the most endearing difficulties in our days – whether health care challenges, economic problems, climate change, rising conflicts, or violence against women- lies in fulfilling this right. Women are more affected by these challenges; they also have the initiative and skills to solve them. The current society is also held back by the gender discrimination that still holds many women back.

The 2030 Sustainable Development agenda and its seventeen Sustainable Development Goals (SDGs) approved by the world leaders in 2015 contains a framework for sustainable advancement that carries everyone along with UNO (2020). The major focus of the SDGs goals for 2030, as captured in the SDGs report 2030, recognized that accomplishing gender equality and empowering women is crucial to every one of the seventeen goals UNO (2020). It is only by guaranteeing girls' and women's rights throughout the goals that inclusion and justice, economies that are suitable for everyone, as well as sustaining our common environment currently and for future generations, can be achieved. The foregoing assertion gains the support of Cornwall and Anyidoho (2010). These scholars stated that realizing sustainable development implies that the issue of gender equality is addressed. This means that policies and strategies towards fostering women's inclusion should be pursued to intensify sustainable development efforts. Fukuda-Parr (2014) Stated further that realizing sustainable development in 2030 requires that the negativity towards women should be adequately contained. It has become imperative based on the outcome of previous SDGS that women's inclusion and promotion be advanced with utmost intensity. Yamin and Falb (2012) reiterated this assertion by stressing women's role in the development agenda for 2030 as encapsulated in the sustainable development goals.

The Status of Women in Jordan

The interest of women in Jordan has significantly improved over the last twenty years, as indicated by higher (though still low) involvement in the workforce, higher academic success, greater life expectancy, and reduced fertility rate. However, notable gaps persist, especially in women's low participation in the workforce and a political endeavor. In Jordan, the right of women, in reality, is relegated. According to the World Bank (2018), many women are confronted with the challenge of dealing with some form of negligence globally. In Jordan, this situation is seemingly getting worse. According to the Civil Status Passport Department (2014), Jordanian Women who are married to men that are not citizens do not have the right to issue citizenship to their children. The official figures show that the number of Jordanian women married to non-Jordanians reached (84.711) citizens, and the approximate number of their children is about (338.844) son and daughter (Gabbay, 2014). This indicates that fostering

women's inclusion in Jordan is essential to promoting women's advancement in the development agenda.

Related Literature and Hypotheses Development

The Role of Women in Education:

Education is a crucial factor in the empowerment, stability, growth, and health of women. The disparity and inequality of women in all fields persist, and marginalized women must be empowered in all aspects of life. In developing countries, lowering gender disparity is important for poverty reduction and acceleration of sustainable development in literacy and primary, secondary and higher education. However, in most cases, women have to struggle against the structure that needs more courage to battle against the socially created gender inequalities. Such success comes from the empowerment process, and education can provide empowerment (Sundaram, Sekar, & Subburaj, 2014). Women's input to the evolution of a society from pre-literate to literate is also undeniable. Primary education is vital to a society's ability to build and accomplish targets for sustainability (Taylor, Quinn, & Eames, 2015). Research has revealed that education can enhance productivity in agriculture, improve women and girls' status, check the growth rate of a population, improve environmental protection, and largely increase the standard of living (Pauw, Gericke, Olsson, & Berglund, 2015; Vare & Scott, 2007). Male and female children are most often encouraged by the mothers in the family to attend and stay in school. Women's function is at the forefront of the chain of advancements resulting in the family's long-term capacity and society (Gran, 2019). Rashidi and Naderi (2012) emphasized the influence of teachers in promoting learning in educational institutions. The scholar noted that female teachers are more flexible and supportive relative to male teachers. And as such, they spend more time promoting students' interests and developing their skills. The activities of women as teachers promote learning in remarkable ways.

Essentially, education is informed by the United Nations Sustainable Development Goals (SDGs), Sustainable Development Goal Education, or ESDGs (Rieckmann, 2017). The fourth objective of the SDGs, SDG 4, to improve quality education, asserts that every learner should gain the skills and knowledge necessary to support sustainable development (Kopnina, 2020).

Jordan showcases a highly educated female population with the potential to improve the economic, social, and political growth of Jordan with an education system that supports fair access for young men and women (Jordan, 2015). In Jordan, women's contribution to education has been increased as the government and society have encouraged their integration in the development process. However, recent studies and reports revealed a paradoxical situation as the women still struggle to hold managerial and leadership positions in higher education (Dandan & Marques, 2017; Singh, 2019). Hence, further investigation is required to evaluate women's current situation in sustainable development achievement by increased participation in education at all levels. Based on this discussion, we expected the following hypothesis:

H1 Jordanian women's educational participation has a significant impact on sustainable development.

The Role of Women in the Workforce:

Studies have shown that firms that adopt a more inclusive and diversified workforce are more profitable (Carter, Simkins, & Simpson, 2003; Hartman & Barber, 2020; Taneja, Pryor, & Oyler, 2012). According to Carter et al. (2003), a diversified workforce incorporates women's

activities at all organizational operations levels. Fine (2013) also stated that having women in strategic leadership positions has fostered companies' growth and penetration into new markets in ways that result in innovation and internal management competence due to diverse skill sets and problem-solving skills. To Hyde (2014), women are more committed and determined to get to the management level, and as such, their performance improves to meet the business's demands. Statistics show that the median female share of the world labor force is currently put at 45.4%. Women's informal and formal labor can change society from a considerably independent society to a partaker in the national economy.

Concentrating on the youth population in Jordan indicates that, in particular, gender gaps arise throughout the transition period from school to work. The overwhelming majority of teenagers and young adults under 20 are still in school in Jordan. As they grow, young men's labor market involvement rates proliferate, with over 90% of the 25 to 29 age group becoming economically active. In comparison, most young women have no safe and adequate job transition but take on duty at home and carry-on household work or care without compensation. Just one in four young women (ages 25-29) is productive workers, with unemployment rates twice as high as their male peers (International Labor Organization, 2018).

The 2019 International Women's Day had its theme as "Think equal, build smart, innovate for change," This theme was chosen to recognize innovative ways to strengthen gender equality and women's empowerment, promote the 2030 agenda, and provide an impetus for the successful implementation of the United Nations' new Sustainable Development Goals. Indeed, small-scale businesses owned by women in developing rural communities, more than just being an extended family's lifeline, also represent a systematic economic groundwork for future generations (International Labor Organization, 2018; Tigges & Green, 1994). Empirical studies show that women with access to economic capital spend on schooling, nutrition, and preventive healthcare for their children and have a lesser birth rate (Lenze & Klasen, 2017; Vyas & Watts, 2009). Indeed, women's chances still lag when compared to their male counterparts. However, women's current and historical role as workers in sustainable development cannot be disputed (Gran, 2019; Kurchenko, Kolomiyets-Ludwig, & Ilnytskyy, 2021), and assessment of women's engagement is vital to set any future plans. Based on the discussion, the following hypothesis was drawn:

H2 The role of Jordanian women in the workforce has a significant impact on sustainable development.

The Role of Women as Volunteers:

Worldwide, Global Volunteers' community development job in host communities improves children's and women's capability and shores up their preserved health and growth. Under local leaders' guidance, volunteers support guarantees access to education, finance scholarships for girls, build schools with girls' bathrooms, and teach literacy among several other things (Green & Haines, 2015; Langer et al., 2015).

The Hashemite Kingdom of Jordan, a resource-limited country in the Middle East largely dependent on international financial support and imports, battled to survive the effect of consecutive demographic and economic shocks (Singh, 2019; World Bank, 2018). Many of the country's chief means of trade have been interrupted, and tourism revenue has decreased significantly due to regional crises. Constant immigration of refugees and foreign workers has greatly contributed to the overstretched government resources as well as national assets and has aggravated challenges in the labor market. Also, the incapacitated condition of the economy has

left many battling to create a decent means of livelihood for themselves as well as their families (United Nations, 2015). These challenges and indeed many more have necessitated the development of discrete priorities, strategies, and policies to enhance the country's development and ensure its citizens' welfare, especially the most vulnerable segments. However, Jordanian development strategies and policies have lacked consistencies and sustainability, with succeeding governments (the majority of whom have not spent up to two years in office) usually abstaining from their predecessors' programs (SOCIAL WATCH, 2017).

In the year 2015, the year the MDGs were programmed to end, a new resolution was adopted by the United Nations, establishing the '2030 Agenda for Sustainable Development with its list of seventeen Sustainable Development Goals (SDGs)' to be attained by the year 2030. In the perspective of this worldwide venture, it is essential to establish where each nation stands in terms of these aspects and the degree to which the agenda of Sustainable Developmental Goals has impacted and been incorporated into policies and strategies for national development (Gran, 2019; SOCIAL WATCH, 2017).

In this regard, Goal 5 of Sustainable Development seeks to promote gender equality and motivate both women and girls (Oparaocha & Dutta, 2011). Volunteering is an exceptional opportunity to empower women (Langer et al., 2015), enabling them to illustrate what they are capable of while learning new skills and abilities (Razavi, 2016). However, volunteering is an activity that both men and women partake in but still very dissimilar (Krause & Rainville, 2018). Despite changing gender attitudes and women's accelerated entrance into the labor market, women still playing an essential role in household tasks and caring for family members for several decades (Agarwal, 2018), which in turn can restrict not only their career paths but also their civic engagement, such as volunteering (Taniguchi, 2006). In this vein, several experimental studies revealed that women are more effective in helping others, but men have more available resources and opportunities to succeed in this domain (Eckel & Grossman, 2008; Einolf, 2011). Having said that, gender equality and empowering women in global volunteering activities can contribute to economic development to a large extent (Themudo, 2009). Moreover, well-developed research indicates that people who volunteer more frequently expect to experience improved physical and mental health (Krause & Rainville, 2018), and formal volunteering is beneficial to opening new working opportunities (Proulx, Curl, & Ermer, 2018).

Although much has not been done in Jordan regarding the SDGs, however, the willingness of the government to give a 'voluntary national review (VNR)' in the year 2017 indicates a step in the positive direction, partly mirroring the government's seriousness in working towards the achievement of the 2030 Sustainable Development agenda (Alawneh, Ghazali, Ali, & Sadullah, 2019; SOCIAL WATCH, 2017). Nevertheless, the degree of women empowerment in volunteering works needs to be evaluated and measured after three years of such initiative. As such, the following hypothesis was predicted:

H3 Jordanian women's volunteer participation has a significant influence on sustainable development.

Role of Jordanian Women in Agriculture:

In Jordan, the agricultural sector contributes 4.5 percent of the country's GDP, with vegetables accounting for about a third of the overall value-added agricultural value (Figueroa, Mahmoud, & Breisinger, 2018). Jordan's agricultural sector has economic and social implications, particularly in rural areas, in which the sector is seen as an income source for some 80,000 rural and urban families. It also adds to the provision of employment opportunities

(Jordan Investment Commission, 2017). In general, women play an essential role in agriculture, from land preparation to product marketing (Satyavathi, Bharadwaj, & Brahmanand, 2010). Labor is regarded as a critical variable in the agriculture sector production chain. The traditional participation of women in agriculture processes has been very profound (Khan, Sajjad, Hameed, Khan, & Jan, 2012; Raney et al., 2011). Women participated in every agricultural process, including planting, weeding, harvesting, and storage and processing (Satyavathi et al., 2010). According to Hourani (2012), most agricultural activities are associated with culture and unique heritage advancement. In Jordan, most women participate in different forms of agricultural activities and thus impact society in remarkable ways while promoting their cultural heritage. Despite the recommendations to involve women in the agriculture sector as labor, little is known about the actual contribution of them in Jordan. Drawn on this unknown contribution, the following hypothesis was developed:

H4 Women's agricultural role has a significant influence on sustainable development in Jordan.

METHODOLOGY

This study evaluated the impact of women's roles in different sectors and their impact on sustainable development. Therefore, its target population includes all the females who have a role in education, agriculture, workforce, and volunteer activities. This study has incorporated the positivism philosophy to avoid interference of data and results. For data collection, the survey method was utilized. The survey design incorporated questions regarding the respondents' demographic profile and roles of women in sustainable development in Jordan, encompassing their roles in education, agriculture, workforce, and volunteers (See Appendix 1). The first survey section comprises a segment that gathers information from respondents, such as age, education, profession, marital status, and monthly income. Centered on a 7-point Likert scale ranging from 1 (Extremely Small Extent) to 7 (Extremely Large Extent), the second section of the questionnaire asks the respondents to assess women's contributions in education, agriculture, work, and volunteer work in Jordan.

The survey scale was developed based on variables measurement from related literature, reports, and indexes. The authors developed the scales for women's role in education, agriculture, workforce, and women's volunteer participation based on relevant literature. However, women's sustainable development role was measured through a scale developed by Ukpore (2009). The created scales and items were exposed to three social work experts, Two Ph.D. Candidates and three master students to answer and refine. The final adapted scales were evaluated by three experts from the Center of Jordan's Strategic Studies. For more validity, and before the actual survey distribution, a pilot study was performed to assess the questionnaire's appropriateness and suitability.

Notably, for data collection, this study designed a questionnaire on google survey and shared the questionnaire link with women from different sectors – as mentioned above. The designed questionnaire was shared through online social media sites, including Facebook, Instagram, and LinkedIn, among the most important social media sites in Jordan (Statcounter, 2021). A total of 450 questionnaires were shared with women across social media sites, out of which 326 females responded, thus, counted to be 72.44% response rate. Out of these 326 responses, 12 responses were not properly filled; therefore, this study incorporated a final sample of 314 responses.

The data obtained were collated and subjected to further analysis. For analysis, the researcher incorporated SPSS and AMOS software. Among these two tools, SPSS was utilized for demographic analysis and evaluating descriptive statistics, while all the remaining tests were performed through AMOS. This study used the structural equation modeling technique to evaluate developed hypotheses. It is also significant to note that the researcher complied with ethical principles during this research, including voluntary women's participation in data collection, ensuring their privacy, acknowledging previous authors, and avoiding interfering with collected data.

RESULTS AND FINDINGS

The first part of the questionnaires explains the demographic profiles of individuals who participated in this study. Table 1 illustrates that out of 314 total women participants, 162 (51.6%) fall in the age range of 18-30 years, followed by 77 (24.5%) women who belong to the age range of 31-40 years. At the same time, 49 (15.6%), 8 (2.5%), and 18 (5.7%) women fall in the age ranges of 41-50, 51-60, and above 60 years, respectively.

Table 1
RESPONDENTS' CHARACTERISTICS

		Frequency	Percent
Age	18-30 Years	162	51.6
	31-40	77	24.5
	41-50	49	15.6
	51-60	8	2.5
	Above 60 Years	18	5.7
	Total	314	100
Qualification	High School	23	7.3
	Intermediate	42	13.4
	Graduation	149	47.5
	Masters & Above	82	26.1
	Professional Qualification	18	5.7
	Total	314	100
Marital Status	Unmarried	208	66.2
	Married	70	22.3
	Others (Single/Parent/Divorced)	36	11.5
	Total	314	100
Monthly Income	Less Than 1500 JOD	5	1.6
	1500-3000 JOD	120	38.2
	3001-4500 JOD	149	47.5
	4501-6000 JOD	27	8.6
	Above 6000 JOD	13	4.1
	Total	314	100
Profession	Professionals	93	29.6
	Administrative	43	13.7
	Managerial & Executive	44	14
	Self-Employed	37	11.8
	Students	70	22.3
	Homemakers/Housewives	27	8.6

	Total	314	100

Table 1 further reveals information about the qualification of women who participated in this study. According to this table, most women (47.5%) have graduation degrees, followed by 26.1% of the total sample with a master's or above degree. 13.4% of females have an intermediate degree, while only 7.3% of female participants have high school qualifications. Out of 314 female respondents, only 5.7% of them have a professional qualification. Thus, the majority of the participants are highly qualified. The next category, 208 (66.2%) out of 314 females, is unmarried, followed by 70 (22.3%) married. In contrast, the least number of female participants (11.5%) are either single or divorced. It means the majority of the participants of this study are unmarried.

As the above information, Table 1 also shows participants' relevant information regarding their monthly income, ranging from less than 1500 JOD to more than 6000 JOD. However, most female participants (47.5%) have a monthly income in the range of 3001 to 4500 JOD, followed by 38.2% of females who have a monthly income in the range of 1500 to 3000 JOD. Thus, most Jordanian females are earning well and participating in Jordan's sustainable development through different sectors. Amongst these females, most of them are professionals, as shown in table 1. Out of 314 female participants, 93 (29.6%) are professionals working in different organizations, followed by 70 females as students, who are accounted to be 22.3% of the total sample. Similarly, 44 (14%), 43 (13.7%) 37 (11.8%) and 27 (8.6%) females are managerial & executives, administrative, self-employed, and homemakers, respectively.

Descriptive Statistics

The descriptive statistics are evaluated through mean, standard deviation, and correlation among variables. Table 2 shows that all the latent constructs' mean values are above 5, which shows that the females' responses were towards the 'large extent' or agreeable side of the scale on average. Among all the constructs, education has the lowest mean value, 5.271, with a standard deviation of 1.227; however, the highest mean value is 5.649 with a standard deviation of 0.867 under role in agriculture.

Table 2
DESCRIPTIVE STATISTICS

Variables	Mean	SD	RAV	RIA	RIE	RIW	RISD
Role in Global Volunteering (RAV)	5.5807	0.90439	1				
Role in Agriculture (RIA)	5.6497	0.86734	.329**	1			
Role in Education (RIE)	5.2707	1.22685	.121*	.283**	1		
Role in Workforce (RIW)	5.3025	1.16852	.145*	.282**	.763**	1	
Role in Sustainable Development (RISD)	5.4087	1.0556	.216**	.414**	.742**	.740**	1

Also, table 2 shows the correlation values of latent constructs. According to this table, role in global volunteering has a 32.9% positive association with a role in agriculture at $p<0.01$. It means an increasing role in global volunteering will increase the role of women in agriculture as well. Similarly, a role as a volunteer has a 12.1% positive association with a role in education. This association is significant at a p-value less than 0.05. It means the increasing level of

females' volunteer participation is also associated with an increasing level of education. Besides, the role of volunteer has a 14.5% positive and significant association with the workforce's role at $p<0.05$. Table 2 also shows that agriculture's role has a 28.3% positive correlation with a role in education at $p<0.01$. In other words, increasing the level of women's role in education increases their role in agriculture.

With a little difference, role in agriculture has a 28.2% positive association with a role in the workforce at $p<0.01$. Both roles in education and the workforce have a similar positive relationship with women's role in agriculture. In comparison, agriculture has a 41.4% positive association with a role in sustainable development at $p<0.01$. In other words, women's role in agriculture has a strong relationship with their role in sustainable development, as previous authors have found a strong relationship between these two roles (Hurst, Termine, & Karl, 2005; Kanter et al., 2018; Nhemachena et al., 2018).

Apart from the above, Table 2 shows that role in education has a 76.3% strong and positive correlation with a role in the workforce, and this relationship is presented with a 99% confidence interval. Similarly, with a little difference, role in education has 74.2% strong and positive association with women's role in sustainable development at $p<0.01$. Amongst exogenous variables, the role in education has the highest correlations with the role in sustainable development. Finally, role in the workforce has a 74% positive association with a role in sustainable development. Thus, roles in education, workforce, and sustainable development are highly correlated with each other, which is also represented by previous authors (Hurst et al., 2005; Nhemachena et al., 2018; Organization, 2017; Wani, Garg, & Sharma, 2003).

Reliability and Validity Analysis

Hammersley (1987) has highlighted the significance of reliability and validity in the evaluation of the quality of a research study. Keyworth, Epton, Goldthorpe, Calam, and Armitage (2020) noted that scale's reliability is presented through finding the internal consistency of items under a construct. While Sahin (2018) stated that reliability measures the extent to which a scale is dependable. Primarily, previous authors have commonly utilized Cronbach's alpha or Composite Reliability (CR) to examine the consistency of the scales; however, CR is considered to be a more appropriate and accurate measure of evaluating reliability (Greene & Carmines, 1980; Peterson & Kim, 2013; Raykov, 1997). Therefore, this study has evaluated the reliability through CR, which is presented in table 3 below. Hair, Anderson, Babin, and Black (2010) have proposed that the values of CR should be higher than 0.6 in order to prove the consistency of the scale. Following table 3 shows that all the values of CR are higher than 0.6; thus, confirm the reliability of the scales.

Table 3
RELIABILITY AND VALIDITY

	CR	AVE	RIA	RAV	RISD	RIW	RIE
Role in Agriculture (RIA)	0.762	0.52	**0.721**				
Role in Global Volunteering (RAV)	0.755	0.509	0.329	**0.651**			
Role in Sustainable Development (RISD)	0.809	0.587	0.414	0.216	**0.766**		
Role in Workforce (RIW)	0.83	0.55	0.282	0.145	0.74	**0.742**	
Role in Education (RIE)	0.85	0.586	0.283	0.121	0.742	0.763	**0.766**

Apart from the above, the researcher has evaluated both convergent and discriminant validity, which are presented in table 3 above. The convergent validity shows the extent to which the new scale is linked to other variables (Russell, 1978). Scholars have examined it with the help of Average Variance Extracted (AVE). Alarcón, Sánchez, and De Olavide (2015) and Cheung and Wang (2017) asserted the threshold value of AVE as 0.5. Above table 3 reveals that all AVE values are greater than 0.5; thus, convergent validity is achieved. Besides, discriminant validity is evaluated to show that one variable's scale does not measure the other variables, rather measuring the same variable (Zaiţ & Bertea, 2011). This kind of validity is measured with the help of the criterion proposed by Fornell and Larcker (1981). According to this criterion, the squared values of AVE are compared with the correlation values. In table 4 above, squared values of AVE are represented in the diagonal and bold farm. These values should be higher than the cross values in rows and columns. Table 3 shows that similar to convergent validity, discriminant validity is also achieved.

Structural Equation Modeling (SEM)

Researchers have primarily adopted this technique to perform confirmatory factor analysis (CFA) and hypotheses testing (Civelek, 2018; Ullman & Bentler, 2003). The results regarding CFA are presented in Figure 1. All the constructs and their covariance values, factor loadings of items, and model fitness are presented. Figure 1 shows that values of CMIN/DF, Significance, CFI, TLI, NFI, IFI, and RMSEA are according to the prescribed limits as proposed by Hair et al. (2010); thus, model fitness is proved. Hair et al. (2010) also proposed that factor loadings should be higher than 0.5, which are appropriate to prove each item's sufficiency of measurement under a construct. All the factor loadings of items under each construct are higher than 0.5; thus, they provide enough contribution to measure the construct, for which they are developed; therefore, items are finalized for SEM.

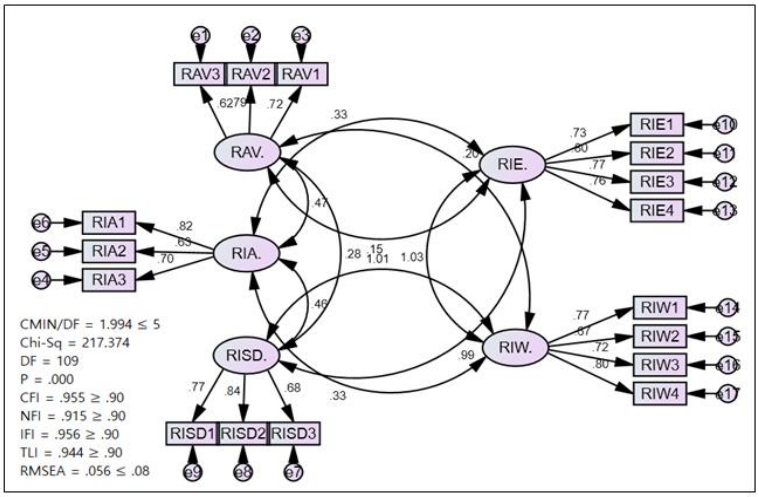


FIGURE 1

CONFIRMATORY FACTOR ANALYSIS

SEM is utilized for hypotheses testing, and the results are presented in Table 4 below. All the exogenous variables are proposed to be directly influential to a role in sustainable development; thus, only direct effects have shown below. According to this table, role in

education (RIE) has a 30.8% positive impact on sustainable development (RISD). This influence is explained at p<0.01; thus, first hypothesis H1 is accepted. It means the women's role in education has a 30.8% contribution to influence their overall role in sustainable development.

Table 4
REGRESSION WEIGHTS: (GROUP NUMBER 1 - DEFAULT MODEL)

			Estimate	S.E.	C.R.	P	Hypotheses Status
RIE	→	RISD	0.308	0.058	5.279	***	Accepted
RIW	→	RISD	0.34	0.061	5.547	***	Accepted
RAV	→	RISD	0.065	0.042	1.546	0.122	Rejected
RIA	→	RISD	0.229	0.046	5.025	***	Accepted

Similarly, the workforce (RIW) role has a 34% influence on the role in sustainable development at p<0.01. Thus, hypothesis H2 is also accepted. It means 34% variance in a role in sustainable development is caused by women's role in the workforce. However, women's role as a volunteer in Jordan has no significant influence on their overall role in sustainable development – as p-value is higher than 0.05; thus, hypothesis H3 is rejected. Conversely, their agriculture role (RIA) has a 22.9% positive effect on sustainable development at p<0.01. Thus, hypothesis H4 is accepted. It means their role in agriculture causes almost 23% variance in women's sustainable development role.

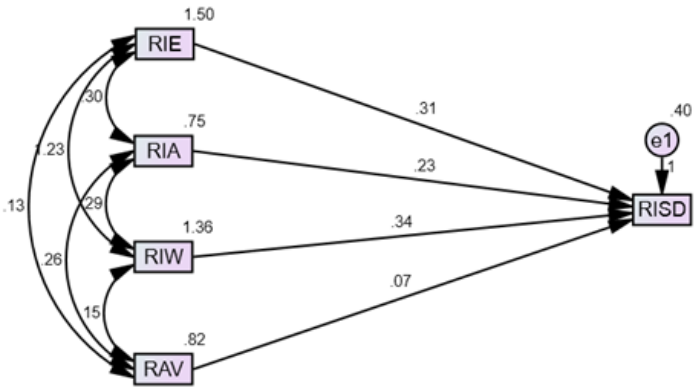


FIGURE 2

REGRESSION COEFFICIENTS MODEL

Similar to table 4 above, figure 2 also shows the regression coefficients or effects of exogenous variables on this study's endogenous variable. In addition to table 4, figure 2 shows that a total of 40% variance in women's role in sustainable development is caused by their combined role in education, workforce, agriculture, and volunteer activities.

DISCUSSION AND CONCLUSION

This study is aimed at evaluating the impact of Jordanian women's role in education, workforce, agriculture, and global volunteering on women's role in sustainable development. The findings of this study have proved all the hypotheses except the third hypothesis. According to the findings of this study, the role of women in education positively impacts women's role in sustainable development. This finding is similar to the research conducted by (Agostino, 2010; Casey & Asamoah, 2016; Daries et al., 2009; Furlotti, Mazza, Tibiletti, & Triani, 2019; Gale, Davison, Wood, Williams, & Towle, 2015; A. Sen, 2013; Taylor et al., 2019). According to Daries et al. (2009), women's education should be ensured from early childhood as it helps overall increasing the income of the family, avoiding parents' decisions regarding females early marriage, minimizing the fertility rates, and falling the mortality level of women as well as infants because of decreasing many diseases which often causes due to early marriages or lack of awareness of females regarding their infants' care.

Conversely, Agostino (2010) has found that women in poor areas, especially in Asian and African countries, are facing problems of gender inequality, particularly with reference to their education. Due to this inequality, females are less aware of their rights; they are more dependent and less skilled; thus, this situation leads to an overall decrease in their contribution to sustainable development. Casey and Asamoah (2016) have highlighted that educationally backward areas restrict women from getting an education; thus, such areas remain low in overall development; however, with the educational programs of international institutions, women have increased their awareness regarding their rights. Authors further asserted that women's role in education had increased their role in other fields like working in different organizations and institutions; their participation in decision making, and their knowledge to maximize their home and work productivity. Similarly, A. Sen (2013) and Gale et al. (2015) have found that women's role in education has a significant and positive impact on their overall role in sustainability development.

Apart from the above, this study's findings suggest a positive relationship between women's role in the workforce and their role in sustainable development. A lot of previous studies have highlighted the similar role of women in the workforce and their relationship with sustainability development (Agostino, 2010; Ambepitiya & Gao, 2019; Baqai & Mehreen, 2020; Furlotti et al., 2019; Gennari, 2018; Gissi, Portman, & Hornidge, 2018; Kenttä, Bentzen, Dieffenbach, & Olusoga, 2020; Zimmerman & Vanegas, 2007). Zimmerman and Vanegas (2007) have pointed out that women's role in the SET field (science, engineering, and technology) increases with each coming day. This increasing role has enhanced women's competitiveness, empowerment, economic independence/growth, uncontaminated environment, and effective governance participation. Thus, overall sustainability development has increased owing to increasing women's participation in SET fields.

Similarly, Kenttä et al. (2020) have found that women's role as high-performance coaches increases over time; however, females have to face many challenges concerning their growing independence in a male-dominated society. Thus, overcoming their challenges and increasing women's participation leads to increasing sustainability. Baqai and Mehreen (2020) have asserted that several Asian countries are listed among the popular countries concerning gender inequality because females have multiple constraints to come forwards in equal to males. The authors further highlighted that foreign countries had increased women's participation in every field; thus, women's participation has increased countries' growth. Similarly, in Asian countries, decreasing the constraints and encouragement regarding women's participation in the

workforce can enhance their sustainable development role. Apart from this, several other scholars have found that women's role in the workforce increases sustainability in the economy and improves it in every field of life (Ambepitiya & Gao, 2019; Gissi et al., 2018).

The third hypothesis has highlighted the relationship between women's role in global volunteering and their sustainable development role. However, this study has not supported the third hypothesis. Primarily the reason is the lack of enough contribution of Jordanian females in global volunteering. Shahateet (2006) has found that women are continuously facing gender inequality in Jordan in terms of their economic, social, legal, technological, and environmental contributions. Shahateet (2006) further asserted that these women are not empowered to think on their own – owing to dependent in a male-dominated society. Agarwal (2018) has noted that despite government and international institutions' encouragement, women are continuously playing their role in household activities rather than participating in the workforce, owing to a lack of empowerment and awareness.

Koburtay, Syed, and Haloub (2020) have found that Jordanian women are less empowered and made their mindset to restrain themselves to homes only due to tribal and Bedouin traditions. This mindset restricts females to think about their volunteer participation in any field of life; therefore, Koburtay et al. (2020) proposed that volunteer participation of females is a high standard, which can only be achieved when the Jordan government increase education, awareness among females, and encourage their participation in different fields. Similarly, Devereux (2008) and Rotolo and Wilson (2007) have significantly incorporated gender segregation in global volunteering. They noted that Asian countries are explicitly male-dominated, less educated, and possessed with old customs; thus, there is segregation regarding males' and females' roles in the society. Particularly, females are considered having a valuable role inside the house; however, males are considered the breadwinner. Thus, this segregation has restrained females from empowerment and volunteer participation, which in turn has decreased the overall sustainable development in these countries.

Finally, this study's last hypothesis has proposed the impact of women's role in agriculture on the role in sustainable development. This study's findings have supported this hypothesis; thus, findings are similar to several previous studies (Agarwal, 1989; Agoramoorthy, Hsu, & Shieh, 2012; Agostino, 2010; Zirham & Palomba, 2016). Agostino (2010) noted that more than 70% of African women participate in agricultural activities. With increasing climate change, the food shortage is increasing, which further enhanced women's participation in agriculture to fulfill their family needs. Similarly, Agarwal (1989) linked women's agricultural contribution with poverty. Especially in rural areas, families have low incomes, which often prove insufficient to feed the family members or fulfill their basic needs. Besides, rural areas are mostly dependent upon agriculture; thus, females support males to maximize their productivity, enhancing females' overall contribution to sustainable development.

Agoramoorthy et al. (2012) also made a significant contribution and studied the role of women in agriculture and its relationship with sustainable development in the context of India. They found that India is largely dependent upon irrigation and encouraging women to participate in vegetation can increase women's living standards. Also, it will advance environmental sustainability in rural areas. However, old traditions in Indian culture are deep-rooted, which is not easy to eradicate; thus, females are restrained from becoming housewives only. This situation restricts females' skills and capabilities; therefore, women's participation will be precious to achieve sustainable rural development. Similarly, Zirham and Palomba (2016) highlighted the importance of females' contribution in the agriculture field to enhance the agriculture sector's

overall productivity, enhance the raw material for industries at cheap rates, and increase sustainable development to a higher level.

Based on the study's findings, it has been indicated that women's role in sustainable development in Jordan is based on their contributions to society's critical sectors, such as the educational sector, the workforce, and the agriculture sector. The data analysis outcome shows that most respondents agree that women play a pivotal role in promoting development as anticipated. Hence the attainment of the 2030 agenda for sustainable development to make human rights a reality for all will be better realized by promoting women's participation in the development agenda. Since gender equality cuts across all the 17 goals (SDGs), it points out that there can be no sustainable development without gender equality. Generally, the study's outcome reflects that maintaining women's rights is paramount in attaining Jordan's development prospect. The inclusion of women in societal affairs must be captured in cultural, economic, and political affairs. Through the productive activities of women, the improvement of the economic growth agenda can be sustained.

Similar to previous studies, this research has some limitations which can be covered by future work. Firstly, this study is conducted in Jordan only; thus, findings are not applicable to other countries. Similarly, this study has incorporated an online data collection method, which has certain disadvantages – primarily considered a method likely to create biased data collection. Thus, future studies are encouraged to incorporate the current model in other countries or compare Jordan's results with another country. Similarly, future researchers are suggested to use field surveys rather than an online method. Finally, several previous researchers have highlighted the importance of gender equality in terms of female's participation in different fields as noted above; thus, it is suggested to use gender equality as a moderating variable on the relationship of women's role in education, agriculture, workforce, and global volunteering (exogenous variables) with women's role in sustainable development (endogenous variable).

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