



Virtual Human Capital: The Transition of Afghan Women from Formal Employment to Digital Entrepreneurship

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Abstract: This paper explored the forced transformation of Afghan Female's human capital through a systematic exclusion from formal employment after the August 2021. With the usage of secondary sources evidence from UN agencies and recent academic literatures, they depict that participation of female in acquiring education, healthcare, social activity and public sector tasks has been collapsed, with only 7 percent of women are employed. In response, women have redirected skills into informal digital and social commerce, now serving as the primary income source for over 80 percent of women-led households. The findings show that this shift represents survival-driven informalization rather than empowerment. Severe financial exclusion, lack of human resource structures, and fragile digital infrastructure constrain sustainability. Grounded in human capital and informal labour frameworks, the study argues that virtual work stabilizes short-term livelihoods but suppresses long-term returns and professional growth.

Keywords: *Afghan women, Agency under constraints, Digital entrepreneurship, Informal labour markets, Virtual human capital*

I. INTRODUCTION

Since 2021, the human capital model of Afghanistan has transitioned from an approved participation model to a regional and domestic resilience pattern. The exclusion of women from the formal labour force would reach exceptional levels by the end of 2026. The Afghan administrative rules that came into effect will take effect in August 2024 and the orders that have limited the involvement of Afghan women in Professional and academic institutions in late 2025. The working environment that they could be present in but now will not be viable for the female category of Afghanistan. Women are prohibited in public, private, universities and schools with only permission to a limited standard (6th) is allowed. This research examines an important socio-economic transformation: the transition of Afghan women from the formal workforce to the irregular and highly dynamic environment of digital entrepreneurship.

The participation of women in Afghanistan's labour market has played an essential role in Afghanistan's development as thousands of women have been employed in the civil service, media, commercial and legal related sectors. More specifically: In contrast, the data and research presented by UN Women and United Nations Development Program scenario (2025) was very grim. More so, the data and research pointed out that only 7 percent of women are in all types of "work" category, whereas, the more than 80% male category held the exact opposite. To find source of livelihood, Afghan women have turned to digital economy and online bazaars as the term "gender apartheid", which is a much serious term than "apartheid", will be awarded by international human rights courts in 2026. This is a very important issue in manpower and a replacement that is worth more than a change in job title; this means that the process is an evolution in human capital in a "virtual" form where professional expertise is used for social commerce on platforms such as WhatsApp, Instagram, Facebook and Telegram.

However, despite the ingenuity, diligence and pains shown by these entrepreneurs, the process is fraught with systemic human challenges. In formal organizational contexts, human capital is created and protected by formal performance management, legal frameworks, and social welfare regulations. Small and medium-sized businesses in the age of technology, especially in an environment like Afghanistan, are in a state of deprivation of support from national and governmental institutions. In this regard, the World Bank's 2025 Information Section report shows a very significant digital divide, with less than 7 percent of Afghan women having access to formal banking and mobile services, forcing digital entrepreneurs to use informal and risky networks like Hawala. Furthermore, the lack of traditional human resource support, such as health insurance, training and development, and workplace safety, makes these women particularly vulnerable to "shocks" such as the planned 2025 internet shutdown.

The main question of this study seeks to answer is the sustainability of the process. Digital entrepreneurs may offer "a substantial lifeline" for short-term survival, but they may lack the structural elements necessary for long-term career development. By examining the self-management practices of these women, this paper will examine the contradictions of economic empowerment and structural marginalization. This paper will argue that while the virtual world is a temporary place for women's human capital, the lack of formal human resource structures and the "intimacy" of the workplace at home may limit the professional growth of an entire generation of Afghan women.

II. LITERATURE REVIEW:

The Digital Transition of Afghan Human Capital

1. The Institutional Collapse and "Gender Apartheid"

Recent findings concerning the situation of women in Afghanistan are leaning more and more towards the term "gender apartheid." In this interpretation, the Taliban rule deliberately excludes women. This is a countrywide, institutionalized system in which discriminatory treatment is not accidental but woven into every aspect of life, sanctioned by law and directed through state and quasi-official as well as administrative means bringing about restrictions on women's access to basic civil, economic, and social rights. This development has been noted by international human rights bodies and scholars who suggest that what emerges from the cumulative effect of edicts and decisions is structural/institutional discrimination. A comprehensive legal analysis published in 2025 asserts that Taliban policies can be objectively understood as constituting gender apartheid as a crime of persecution, in disregard for the international commitments of Afghanistan under such treaties as the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and International Covenant on Civil and Political Rights (ICCPR)(AJA, 2025).

The latest reports from the United Nations Assistance Mission in Afghanistan (UNAMA) highlight further restrictions on women's participation in society for the years 2024-25. The reports show that women are losing out on employment opportunities in public institutions and private companies. As a result, they do not have the economic power like men to not only meet the needs of their families but also to repay what is owed to them or to choose to earn something for themselves. A woman cannot go to work without a male guardian, and many women have been excluded from jobs in work, health, education and civil society that were newly available to them under UNAMA (2025).

Among the key laws that have made this possible is the Taliban's Prevention of Evil and Enjoining Good Law (adopted in August 2024). The law gives broad and vague powers to accountants and other government agencies to control women's dress, movements and behavior. This limits their access to the workplace as well as markets. In the form of Gender Brief UN Women 2025 reports that the Act has made a range of gender control practices a recognized right (UN Women, 2025). Setting limits on women's autonomy and agency has become the norm. In addition to these laws and regulations, the effects of these restrictions have arrived. According to UNAMA and civil society monitoring reports, women have been barred from studying alongside men beyond the sixth grade (for 7 hours), kept out of universities, and barred from career paths that were previously closed to them but once provided opportunities for social mobility and economic self-sufficiency. These restrictions not only impede women's participation in the formal economy, but also disrupt two decades of established channels for human capital development (UNAMA, 2025).

The denial of women's basic right to work is quite alarming and has dire economic consequences. The results of forecasts provided by national and international organizations show that women's deprivation of work will reduce household productivity and even at the national level, which will result in an economic crisis in Afghanistan. The lack of availability of legal jobs pushes specially women into the informal/underground work sector. The law does not protect women working in this sector and they are paid much less (Rahmati, 2026). Socially, the psychological effects of these policies are significant. Although not directly related to a published article, the idea of a "broken psychological contract" refers to the implied understandings between citizens and the state regarding rights, recognition, and justice can be used to explain how women have come to accept the loss of opportunities and roles they once had. This theoretical approach implies that the denial of access to formal employment and society is more than just a reduction in economic engagement, but rather a reconstruction of individual identities, hopes, and faith in institutions that once facilitated inclusion and citizenship.

Taken together, a complete picture emerges: the policies in Afghanistan today are more than just restrictive and represent a deep-seated system of gender-based exclusion that has been termed "gender apartheid" (AJA, 2025).

2. The Shift to Digital Entrepreneurship as "Silent Protest"

Digital entrepreneurship is rapidly emerging as an urgent and necessary occupation for women who are deprived of the working and organizational environment to participate in economic affairs. This ascending opportunity is not only a survival strategy but also a key tool that has led to the growth of the disadvantaged class in conditions of social and political deprivation. For example, since late 2021 in Afghanistan, where job opportunities for women have decreased significantly, women have increasingly turned to online and digital platforms to earn a living, especially social media such as Facebook, Instagram, Telegram and WhatsApp. This tendency of women, respectively, has led to the creation of informal digital markets that are independent of the usual activity of public space. This allows women to overcome limitations on mobility and access to the workplace and use digital technology as a platform for economic survival in conditions of exclusion (Hafizi, 2025).

Since Afghan women have no alternative sources other than digital business, their dependence on digital entrepreneurship is still quantitative. According to the United Nations Development Program (UNDP) report more than 80 percent of women-controlled businesses depend on their business income as the main source of livelihood for their families, reflecting the importance of digital and micro entrepreneurship for the survival of families (UNDP, 2024). This process is not only visible in the crisis situation in Afghanistan, but in any country with low or middle incomes, such digital platforms serve as the main source of income to improve the lives of families. Women can use these platforms to market their products, process transactions and maintain contact with their customers. According to the study conducted by the Cherry Blair Foundation for Women reported that 88 percent of women entrepreneurs use WhatsApp and 74 percent use Facebook to achieve business purposes, reflecting the high use of social commerce platforms to connect with customers outside of physical marketplaces (Cherry Blair Foundation for Women, 2025).

The academic literature also supports this desire for digitalization, reporting that digital platforms can be a good alternative for women who have been excluded from working for government and institutional organizations. The systematic review of digital inclusion indicates that digital platforms can reduce barriers for women to enter entrepreneurship in the informal sector by providing access to financial services, business information, and customer networks (Soumya and Pai, 2025). For instance, in India, the use of social business platforms by rural women entrepreneurs has a direct correlation with improved business sustainability and market access despite existing disparities in digital literacy and infrastructure (TOI, 2024). These findings suggest that digital entrepreneurship can serve as a more equitable economic platform, not because gender discrimination has been eradicated, but because digital platforms can reduce some of the barriers to entry and replace traditional entry barriers such as physical market access or commercial networks with male-dominated product values.

However, the digital economy is not an invincible phenomenon. There is evidence that online activity reflects and reproduces existing socio-economic inequalities. Some of the most important and valuable barriers that can be mentioned are: the high cost of internet access, lack of connectivity, and online violence. For instance, based on evidence, it is said that in developing economies, women have less access to the internet than men, thus preventing them from fully entering digital markets and e-commerce platforms (Trumbic and O'Connor, 2025). Online violence in the form of gender-based harassment also prevents women from fully engaging with digital platforms, thus forcing them to reduce their presence in social media or reduce their business (Blair, 2025).

In simple terms, it means improving income and the power of disadvantaged women as much as giving them the opportunity to survive. This is especially the case when they have limited competence and are affected by the crisis. While digital platforms can increase market access and contribute to household income, their full use requires addressing structural inequalities in connectivity, skills, and safe online spaces. Evidence from reports and the academic literature indicate that participation in the digital economy is an increasingly important, but uneven, gateway to women's economic empowerment (UNDP, 2025; Blair, 2025).

3. The “Informal HR” Deficit among Afghan Digital Workers

One of the important and urgent issues raised recently in the human resource and labour market literature is the absence of a structure to fundamentally solve human resource problems, especially in the sector of digital and informal workers. This problem is more common in countries with fragile and backward economies, such as Afghanistan. This can be called the informal human resource deficit, where workers are not part of the formal organization and do not have full access to support, financial inclusion, and skill development opportunities. This mostly affects women in the field of digital commerce in Afghanistan.

One of the main features of this gap is financial exclusion. As indicated by the UN Women Gender Index, 2025 only 6.8% of Afghan women have access to formal banking channels or mobile money services, a figure that is quite lower than the more than 60% global average. It is not merely a financial issue, but also an H.R. and labour market failure as this access to financial networks is a pathway to formal contracts, payroll management, savings and access to credit. Most digital workers employ the Hawala system which refers to an informal system of money transfer due to lack of banking access. In a low institutional setting, the Hawala system is a temporary solution but it is not transparent, secure or scalable. As demonstrated by (Suganya and Thenmozhi, 2025), using informal financial systems severely curtail a business's growth potential. It achieves this by limiting credit access, increasing transaction costs and denying access to international digital labour markets. From an HR perspective, it rejects the organized option of wage payment schemes, performance-linked incentives and social security payments.

This Informal HR gap's second relevant dimension is skill stagnation. Digital workers are either self-employed or remote affiliates of online platforms in Afghanistan. Consequently, no organization structure, mentoring program, or training system is set to operate. The ILO (2025) has motivated cooperative and collective approaches as mechanisms for resource integration, enhancing bargaining position, reducing transaction costs, and increasing bargaining power. Due to a lack of institutional capability, regulatory ambiguity, and security concerns, these instruments have suffered from inaction and non-usage. As a result, the digital workers within this informal complex have been engaged in “self-managed stagnation”. The employees are hereby permitted to use their skills for short-term monetary benefits on a regular basis. However, it is rarely upgraded for long-term financial gains.

Afghanistan claims that the industrial revolution 4.0 will pass over the developing countries and the informal digital economy will face similar fate. The informal digital economy in Afghanistan is, in other words, producing more informal digital labour than formal digital labour. In conclusion, Afghanistan's informal digital economy is producing higher levels of informal digital labour by design. In developing countries, like Afghanistan, the transition from informality to formality in the digital arena is surely lagging behind.

Recent research on informal digital labour shows that a lack of HR systems results in a huge waste of human capital. Digital workers are not subject to frameworks for talent development, systems for performance management or platforms for lifelong learning. Consequently, they find themselves defaulted into a wasteful equilibrium of unproductive work. As a result, now digital labour is a survival activity instead of being a progressive activity. Women who work in the digital sector face a double disadvantage in particular because of their limited mobility, lower networking opportunities and lack of access to talent development environments.

Therefore, the gap in informal human resources in the Afghan digital labour market is not marginal but more structural. Financial exclusion and skills deprivation is a mutually reinforcing duality. This duality forms a vile circle with the digital labour not progressive but productive only.

4. Barriers: The Digital Divide and Infrastructure

Challenges preventing women in Afghanistan from online entrepreneurship are serious and complex with structural, socio-cultural, and infrastructural elements. The combined effect of these challenges limits the ability of Afghan women to engage effectively in online economic activities. The fundamental and grave challenge that still exists as a global gender digital divide is that very few Afghan women have access to the internet. Although quantifying this is a moving target, most credible figures suggest that 6% of all Afghan women have access to the internet as opposed to far greater levels of male internet access. As a result, these statistics themselves are indicative of the gaps and serious inequalities in the availability and usage of digital technology. According to Nusratty & Crabtree (2023), the seriousness of the challenge lies not just with these numbers but also with the infrastructural deficiencies (power cuts, poor internet connectivity, etc.) that impact their ability to conduct online business (Frackiewicz, 2025).

One more serious obstacle created by the current political regime and its impact on critical infrastructure is the internet shutdowns and blackouts that have been imposed in various parts of the country. Internet connectivity impacts the internet quality negatively, and one of the few spaces where women can access markets, training, and information, is affected. Women using such space creates a governance issue. Essential components for entrepreneurship are entirely restricted. For instance, when policy choices resulted in, despite being on various fibre-optic and mobile internet services, users were cut off from business communication and access to customers across borders (ABC News. 2025). Due to this, it ends the indirect subsidiary of women for entrepreneurship as other professional competencies and industry-specific skill sets get omitted. Due to the intermittent nature of connectivity, which some analysts have referred to as an external shock for micro-businesses without policy buffers, online businesses cannot be planned for scaled-up (Nusratty & Crabtree, 2023). Women entrepreneurs face a significant barrier in domestic digital literacy and the use of digital tools and key infrastructure. In other words, they face a huge gap. An investigation into Afghan women, for example, found a lack of digital skills to be a major barrier to effective use of e-commerce, social media marketing, and online payments.

Socio-cultural factors limit women's access to technology and economic networks. In light of these obstacles, socio-cultural factors come into play. In many societies, conservative beliefs limit women's possibilities in life, including their access to mobile phones or computers alone. Moreover, values afford women a lesser degree of freedom to engage in economic activities in general (Azimi, 2025). Moreover, they incur additional damage regarding the support they receive from their family to engage in digital activities. Consequently, it negatively impacts their self-assurance and self-sufficiency, which are necessary traits for possessing an entrepreneurial spirit in digital markets. Moreover, Nusratty and Crabtree (2023) point out that women's limited access to formal training and education compared to men hinders their readiness for entrepreneurship in the digital economy. The economic factors are further interwoven with these social factors. Women's ability to access (Gallup, 2023) economic resources and capital does not permit them to invest in digital devices, data plans, and training. Women face increased difficulty in establishing online businesses as a result.

Ultimately, the biggest issues of digital inclusion in Afghanistan are the policies and regulations. The nations in the region each have a digital economy, which can be attributed to various government policies enabling digital economy. Afghanistan lacks strategies to make the internet affordable, formulate policies for gender-sensitive technology education, digital business development of women entrepreneurs (Hashimi and Azeem,

2025). The lack of supporting policies impedes women from becoming digital entrepreneurs not due to their potential, but because of a barrier that stops them from entering and growing in the digital market.

Research Methodology:

The research method in this paper is a qualitative method using secondary sources and usually focuses on human resource changes, especially Afghan women, during times of exclusion from government institutions after 2021. Due to a number of political and ethical factors that made it more difficult to access primary sources and collect data in person, this article has used only the sources that were available online. Sources used in this article are collected from UNAMA, UNDP, UN women, World Bank, and ILO, along with some articles from peer-reviewed journals about gender, labour markets, financial inclusion, the unavailability of formal HR structures, and digital entrepreneurship in backward countries such as Afghanistan.

Findings:

The ability of Afghan women to earn an income is not extinguished but has been driven out of formal institution and economic structures and into a very unstable digital economy. A modified human capital approach, in other words, offers the best explanation. It appears that humans have gained knowledge and skills through education but are being those skills and knowledge from generating returns. To illustrate, since the Law on the Propagation of Virtue and the Prevention of Vice was implemented in August 2024 shutting down sectors in 2025, women have not been able to work at all. They are effectively completely shut out of education, healthcare, government service, and almost all private-sector jobs. As it happens, only 7 per cent of Indian women are engaged in any job currently and over 80 per cent men. That indicates almost complete disintegration of gender rights.

Because of their exclusion from the formal institutional structures of the economy, women have begun reallocating their human capital into social and digital forms of commerce on the platforms of WhatsApp, Instagram, Facebook, and Telegram. Over 80 percent of women-owned businesses have empirically been shown to use this income as the main source of their household revenue. This, however, is not a means by which the workforce can evolve. Instead, it is informalization. Digital entrepreneurship is, by all means, informal. That is, it extends well beyond the boundaries of the formal workforce, formal labour, formal legal frameworks, and formal human resources. There are no contracts, no social security, no health insurance, and no ladders to climb in their jobs.

There is also the impact of strong informal HR constraints suffered by women as a means of virtual work disparate in design, but highly informal in scope. The informal use of Hawala services, which are more transactional risk-laden, is necessary due to the lack of formal banking and mobile money services available to women, which is less than 7 percent. Internet services tend to be prone to disruptions, and unstable electricity, combined with low levels of digital literacy, further exacerbates the external vulnerabilities of women's digital businesses. Although the work digital offers women economic ability by sidestepping constraints on their movement, that ability is still constrained by structural factors.

The short-term nature of the virtualization of women's human capital as a coping mechanism as opposed to a strategy for long-term accumulation or development is clear. Afghan women's digital work is economically precarious and productive, but only until the lack of institutional reintegration is addressed.

Discussion

The research findings contribute to understanding the gendered exclusion of labour in the digital era, specifically framing the virtualization of Afghan women's human capital not as a digital empowerment tool, but as a response to institutional failure. Consistent with human capital theory, it stands that women's skills, education, and work potential remain intact; rather, the means to transform this potential into economically productive outcomes have been systematically eroded. Economic activity has shifted to the unregulated, informal digital economy despite the legislative requirement that women not be permitted to participate in the formal sector after 2024. The emergence of digital entrepreneurship among Afghan women serves as an example of the informalization of the labour market in times of crisis, according to studies on informal labour. Platforms for social commerce offer a way to participate in the economy, but they also replicate the hazards

of the informal sector, including unstable income, lack of legal protection, and vulnerability to outside shocks. The lack of formal banking, social security, and human resource systems in the country reinforces the view that digital labour is devoid of the institutional supports needed for productive and sustainable integration into the labour market. This corroborates previous studies that claimed that in fragile states, digital platforms provide no substitute for the absent state and organizational support.

The findings back up the gender and development literature that has theorized women's economic participation with the phrase 'agency under constraints.' Afghan women participating in digital commerce strategically try to overcome the constraints of mobility and visibility, although the constraints of legality, infrastructure, and socio-culture still dominate the context. Internet shutdown, unstable electricity, and the lack of digital literacy close the window of opportunity and frame digital entrepreneurship as a strategy to survive instead of an opportunity to economically empower mobility. Also, the localization of work to the home setting further blurs the lines between productive and reproductive work, reinforcing existing norms around gender and professional stagnation.

To summarize, the discussions above have uncovered a paradox. On the one hand, digital labour offers a short-term adaptive strategy; on the other, it incorporates and entraps long-term adaptive risk. Without targeted strategies to bridge the gaps of financial inclusion, digital frameworks, informal HR, and the virtualization of women's human capital, the 'adaptable' coping strategy of human capital virtualization may indeed only provide a stable future survival strategy for the household, to the detriment of its development.

Conclusion

This research focused on the transformation of Afghan human resources amid systematic institutional exclusion, mainly concentrating on the transformation from legal employment to digital and social entrepreneurship. Findings show that the systematic exclusion of women from education, healthcare, civil service, and the private sector has not lessened women's human capital and economic potential but rather has forced them to function within unregulated virtual spaces. Consequently, digital entrepreneurship, as a means of survival, results in an unregulated virtual economy rather than a developmental opportunity.

The findings show that in spite of the short-term economic opportunity that virtual work offers, the context remains one of extreme economic insecurity. Issues such as no formal banking, the absence of organized human resources, and the risk of disrupted infrastructures all negatively impact the potential of women's digital entrepreneurship. While the virtualization of human resources provides an economic opportunity, it does not foster the development of human capital in the long run.

The research contributes to the human capital and gendered literature on the labour market because it shows how human capital is maintained while the returns to that capital are structurally repressed. Afghan women are demonstrating economic agency within a very limited scope, but this agency is once again repressed by institutional exclusion and informal systems. Virtual economic agency, worse than informal systems, establishes a repressive situation without unlocking development, thus keeping the precariousness for Afghan women as long as there is no reintegration into formal systems or nothing is done concerning financial inclusion, digital systems, and labour protection.

Limitations & Future Research:

Since this article is based on secondary sources, it cannot provide comprehensive and decisive information as a substitute for primary sources collected from each individual and household. Therefore, for future research, it is recommended that researchers implement their research using primary research and sources, which will be able to add value to the validity of the results obtained.

Declaration of Conflicting Interest

The authors declare no potential of interest with the research, authorship or publication of this paper.

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