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Artículos científicos

El uso de internet en mujeres emprendedoras de zonas marginadas del sureste de México

The use of the internet in women entrepreneurs in marginalized areas of Southeast México

O uso da internet por mulheres empresárias de áreas marginalizadas do sudeste do México

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Resumen

El emprendedurismo favorece el desarrollo endógeno de las comunidades indígenas, ya que mejora su calidad de vida, fortalece sus competencias, evita la migración, promueve el desarrollo sostenible, contribuye a la preservación del patrimonio cultural y favorece su inserción en la sociedad de la información y del conocimiento. En México, se ha constituido como uno de los temas prioritarios para el desarrollo económico del país; sin embargo, a pesar de los esfuerzos llevados a cabo por los gobiernos federales y estatales de la nación, todavía se observan serias dificultades para la participación de las mujeres rurales en este rubro. Por ello, en este trabajo se llevó a cabo un estudio cuantitativo en el que participaron 92 mujeres emprendedoras que se encontraban en zonas sociales y económicamente marginadas o de condiciones de pobreza extrema. En concreto, las participantes residían en tres sectores del interior del estado de Yucatán, en el sureste de México, y se dedicaban a la fabricación artesanal de ropa, alimentos, adornos para el hogar y juguetes. Los resultados muestran que solo 38 % cuenta con servicio de internet y que la mayoría tiene poco entrenamiento para usarlo; además, su costo es elevado. Entre las razones para no contar con internet en el hogar se pueden mencionar el que no exista conexión en el municipio (52 %) y el que ellas no lo consideren necesario (43 %). Asimismo, se puede indicar que usan internet principalmente para ver películas, tomar fotos y escuchar música, así como para revisar el correo electrónico; de hecho, solo 13 % sabe usar un programa de contabilidad para su negocio.

Palabras clave: comunidades indígenas, emprendedurismo social, internet.

Abstract

Entrepreneurship favors the endogenous development of indigenous communities as it improves their quality of life, strengthens their skills, prevents migration and promotes sustainable development and contributes to the preservation of cultural heritage, in addition to favoring their insertion into society. of information and knowledge. In Mexico, it has become one of the priority issues for the economic development of the country, however, despite the efforts carried out by the federal and state governments of the nation, there are still serious difficulties for the participation of the rural women in this area, compared to men. In this work, a quantitative study was carried out in which 92 entrepreneurial women who are in socially and economically marginalized areas or in conditions of extreme poverty

participated. These women belonged to three areas of the interior of the State of Yucatan, in southeastern Mexico, dedicated to the artisan manufacture of clothing, food, home decorations and toys. The results show that only 38% have an internet, arguing that the majority of the service has little training to use it and that the cost is high. In addition, among the reasons for not having internet at home is the fact that there is no connection in the municipality (52%) and that they do not consider it necessary (43%). Among those who use the internet, the main activities of use were watching movies, photos and listening to music, checking email, and only 13% know an accounting program for their business.

Keywords: indigenous communities, social entrepreneurship, internet.

Resumo

O empreendedorismo favorece o desenvolvimento endógeno das comunidades indígenas, pois melhora sua qualidade de vida, fortalece suas competências, evita migrações, promove o desenvolvimento sustentável, contribui para a preservação do patrimônio cultural e favorece sua inserção na sociedade da informação e da sociedade. No México, tornou-se um dos temas prioritários para o desenvolvimento econômico do país; No entanto, apesar dos esforços dos governos federal e estadual do país, ainda existem sérias dificuldades para a participação das mulheres rurais nessa área. Por isso, neste trabalho foi realizado um estudo quantitativo no qual participaram 92 mulheres empreendedoras que se encontravam em áreas social e economicamente marginalizadas ou em condições de extrema pobreza. Especificamente, os participantes viviam em três setores do interior do estado de Yucatán, no sudeste do México, e se dedicavam à fabricação artesanal de roupas, alimentos, decoração e brinquedos. Os resultados mostram que apenas 38% possuem serviço de internet e a maioria tem pouco treinamento para utilizá-lo; além disso, seu custo é alto. Entre os motivos para não ter internet em casa, podemos citar que não há conexão no município (52%) e que não consideram necessária (43%). Da mesma forma, pode-se afirmar que utilizam a internet principalmente para assistir filmes, tirar fotos e ouvir música, bem como para checar e-mail; na verdade, apenas 13% sabem usar um programa de contabilidade para seus negócios.

Palavras-chave: comunidades indígenas, empreendedorismo social, internet.

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Introduction

For several decades, entrepreneurship worldwide has been seen as the key to economic development because it allows the triggering and use of skills to address business problems and challenges in various contexts. According to various authors (Beugelsdijk and Noorderhaven, 2005; McGrath and MacMillan, 2000; Murmann and Sardana, 2013; Shane, Locke and Collins, 2003), the entrepreneur is characterized by being a person who plays the role of change agent in the social sector, since it not only recognizes and tirelessly pursues opportunities, but also analyzes risks to achieve its mission, participating in a process of construction, innovation, adaptation and continuous learning.

In Mexico, the social phenomenon of entrepreneurship does not present the characteristics or levels of progress of developed countries (eg, United States, Switzerland, Canada, Sweden, Denmark), where men and women have learned to enhance their entrepreneurial skills. They have expanded their job opportunities and have profitable businesses. In fact, in our context there is a social gap between men and women who undertake, which has caused the latter to lag behind. This situation becomes even more acute when the phenomenon of entrepreneurship is addressed in rural communities located in marginalized areas, since in these regions the indicators for women's economic activity are not very encouraging (Gómez Gutiérrez, Armenteros Acosta, Guerrer Ramos and López Chavarría, 2015), despite the efforts made by federal and state authorities to increase and promote their participation in the creation of companies that allow them to expand their job opportunities, develop an entrepreneurial mindset and contribute to social and social empowerment. economic of the populations in situation of poverty.

In Mexico, according to the National Institute of Women (Inmujeres), although the presence of women in the workplace has gradually increased, more initiatives have yet to be promoted to raise these figures (Instituto Nacional de las Mujeres, 2017). Due to this situation, the aforementioned institute has promoted actions to counteract this situation: one of them consists of strengthening the capacities of women to achieve economic autonomy through the improvement of their training levels and through advice and financing governmental. In addition to these support guidelines, the institute also highlights the role played by the implementation of technological innovation in its companies as a method to facilitate insertion in the information and knowledge society and as a strategy to face the new challenges imposed by the Global economy (Instituto Nacional de las Mujeres, 2017).

The present work, therefore, bases its theoretical references on the studies of Yunus (2008, 2010) - creator of the so-called bank of the poor -, who highlights in his works the importance of the incorporation and use of digital technologies in the Entrepreneurial women companies with the intention of strengthening their conditions and quality of life. The relevance of incorporating this theorization is found in the link between Yunus's principles (using ICT in the work of women entrepreneurs) with the contextual nature of the participating population and with the referents of social entrepreneurship. For this, this research presents the uses that women entrepreneurs from marginalized communities give to the internet, as well as the main reasons why they do not have this service in their homes and their attitude towards technology.

The study of social entrepreneurship has gained strong momentum in several countries (India, Australia, China, Malacia and Bangladesh) and there is a growing interest in educational institutions, government agencies, non-governmental organizations and business centers that motivate the implementation of public and fiscal policies (Arana Landín, 2010, 2012; Monzón Campos and Chaves Ávila, 2012; Pérez de Uralde, 2014). In this sense, Bosma, Schott, Terjesen and Kew (2016), in the special report on social entrepreneurship prepared for the Global Entrepreneurship Monitor (GEM), define the social entrepreneur as “an individual who is beginning or currently leading any type of activity, organization or initiative that has a particularly social, environmental or community objective” (p. 9). For their part, Sengupta and Sahay (2017) define social entrepreneurship as the construction of multiple dimensions that includes the entrepreneurial drive to innovate in decision-making skills, assume and analyze risks in the social search and consistently focus on action despite contextual or moral complexities. In this regard, Curto (2012) points out the five characteristics that distinguish a social entrepreneur: “Its objective is to create social value; is capable of capturing social needs; fight back with innovative proposals; their aversion to risk is below average; and it has scarce resources to carry out its work” (p. 22).

Now, taking up the special report on social entrepreneurship prepared for the GEM (Bosma et al., 2016), the results corresponding to Mexico regarding a list of entrepreneurs involved in social entrepreneurship show that 2.2% are in the star-up, 1.4% in the operational phase and 2.7% of the entrepreneurs are identified as incipient or operational leaders. These results are more relevant when compared with the results of the 58 countries participating in the study, since it is observed that 3.2% of social entrepreneurs are in the star-up phase. In the same GEM study (Bosma et al., 2016), but regarding the gender of entrepreneurs, the

following figures appear: 55% are men and 45% are women; Furthermore, it is highlighted that in South and East Asia, as well as in Latin America and the Caribbean, female representation is high, regardless of the type or phase of social entrepreneurship.

For their part, Kelley et al. (2017) —in the GEM 2016/2017 report on female entrepreneurship carried out in 74 countries— estimated that 163 million women were starting or leading new companies, and that 111 million had established incomes. These data show not only the growth and social welfare of this sector, but also the collateral impact that it has on family income, the increase in employability in the communities, as well as the supply of jobs and services, which transforms quality life of families. In our context, among the information surveys that the National Institute of Statistics and Geography (Inegi) carries out in the homes of the national territory is the National Survey of Micro-businesses (Enamin), through which important considerations regarding its administration were detected. in the year 2012.

The results reported that there are 9.19 million microenterprises, of which 48% are men and 52% women (Inegi, 2012). Regarding the main reason for starting the activity or business, it was observed that 25% (relative majority) of the total of those surveyed did so to supplement the family income. In fact, it stands out even more that of all women, 41% have started their business for this reason, compared to 8.63% of all men. In summary, the GEM grouped the reasons why the study participants decided to undertake into two categories: need and opportunity (Table 1).

Tabla 1. Tipos de emprendimiento por género

Categoría de emprendimiento	% de hombres	% de mujeres	% total
Por necesidad	52.2	72.3	63.4
Por oportunidad	47.8	27.7	36.6
Total	100.0	100.0	100.0

Fuente: Inegi (2012)

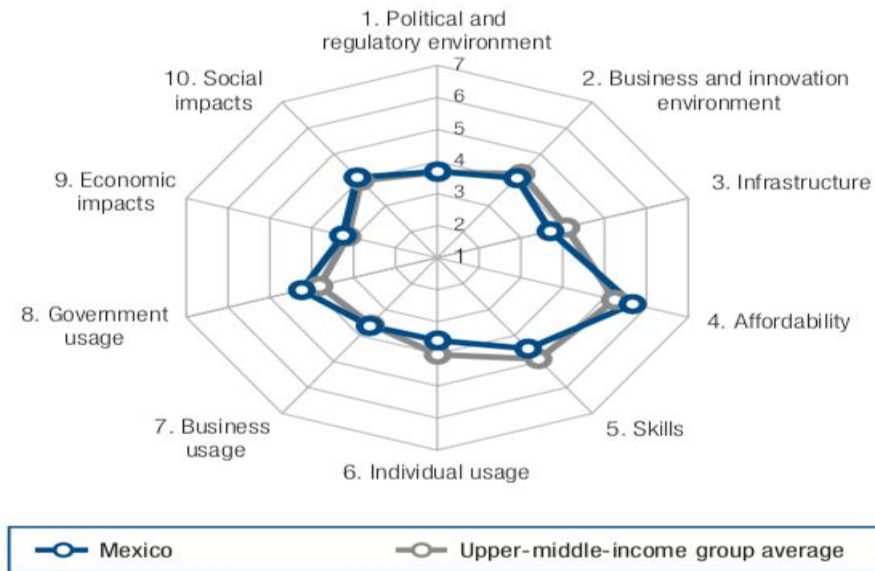
The use of the internet in entrepreneurs

Worldwide, and according to the 2016 Global Information Technology Report: Innovating in the Digital Economy, prepared for the World Economic Forum, and The Business School for the World , INSEAD), a large increase is expected for human development as the fourth industrial revolution advances and the effects of new technologies

unfold, such as artificial intelligence, the internet of things, the analysis of big data, 3D printing and quantum computing. The importance of this report lies in the fact that ICT will be the backbone and the spearhead of economic development within the new information society, and only the most prepared and those who know how to adapt and manage knowledge in favor of their companies or organizations will be able to take advantage of these advantages with a view to success (Baller, Dutta and Lanvin, 2016).

The activity of the promoters of the ICT revolution worldwide has been analyzed by both institutions (World Economic Forum and INSEAD) since 2001, based on the Networked Readiness Index (NRI) currently used 53 criteria to establish said index for 139 countries where the study in question is carried out, which allows the identification of priority areas to make the most of ICT for socio-economic development. This work describes four notable characteristics: 1) innovation is increasingly based on digital technologies and business models that can drive the economic and social benefits of technologies if they are channeled intelligently; 2) the adoption of technologies by companies is key, so governments should prioritize encouraging and encouraging companies to enhance these tools so that they can improve their indicators and solve their problems; 3) both the private and government sectors should intensify their efforts to invest in the use of digital technologies, which will raise social impact indicators; and 4) the sustainable digital economy will depend on the rapid evolution of government platforms that allow societies to anticipate and shape the impact of emerging technologies and react quickly to changing circumstances (Baller et al., 2016). Figure 1 shows the impact of technologies for Mexico, which ranks 76th out of 139 participating countries.

Figura 1. Informe global de Tecnologías de la Información de México

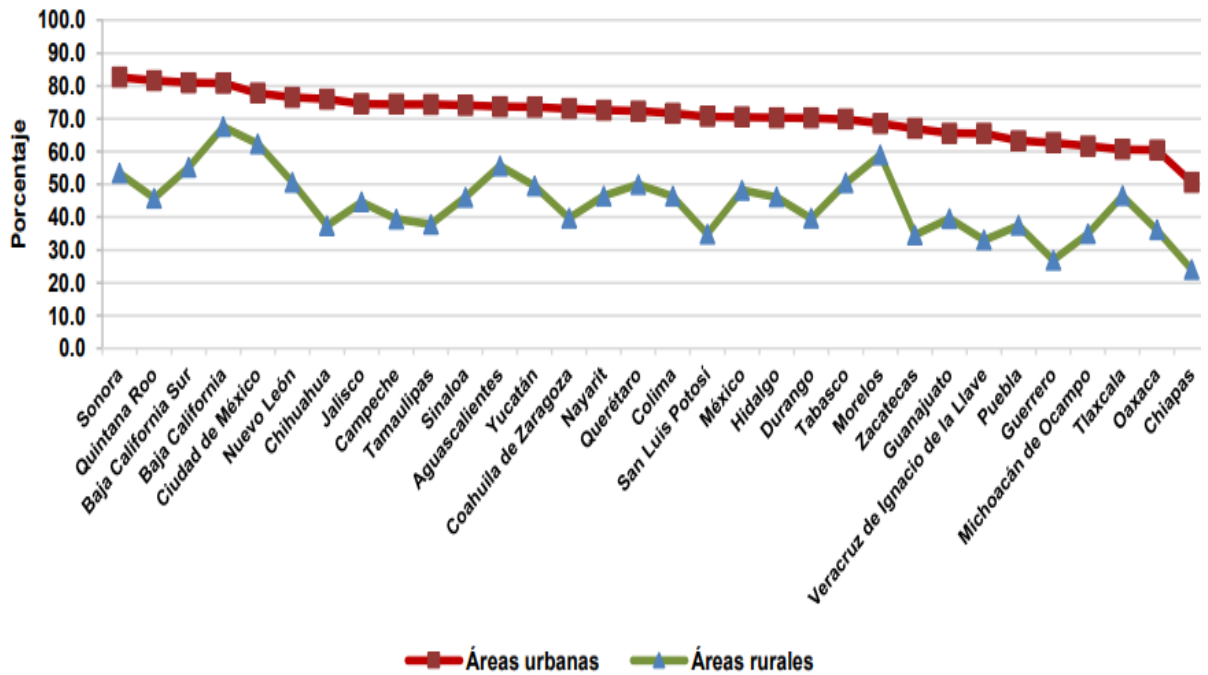


Fuente: Baller (2016)

The final objective of the initiative of the World Economic Forum is to help configure the Internet as a true and open platform that can serve society to promote economic development and social progress, in such a way that it contributes to the advancement of the revolution of ICT is truly global, growth-friendly and inclusive (Baller et al., 2016).

At the state level, and in the same order of ideas, the National Survey on Availability and Use of ICT in Homes (Endutih) (2017), conducted by Inegi (2017), reported a total of 63.9% of internet users in Mexico, that is, 71.3 million people. In this sense, it is highlighted that of the national average of users by federative entity, in Yucatan 49% are women and 51% men, percentages that are lower in rural areas (figure 2), where the rural national average is located at 39.2% (Yucatán is just above the average, according to Inegi data).

Figura 2. Usuarios de internet por entidad federativa (contexto urbano y rural)

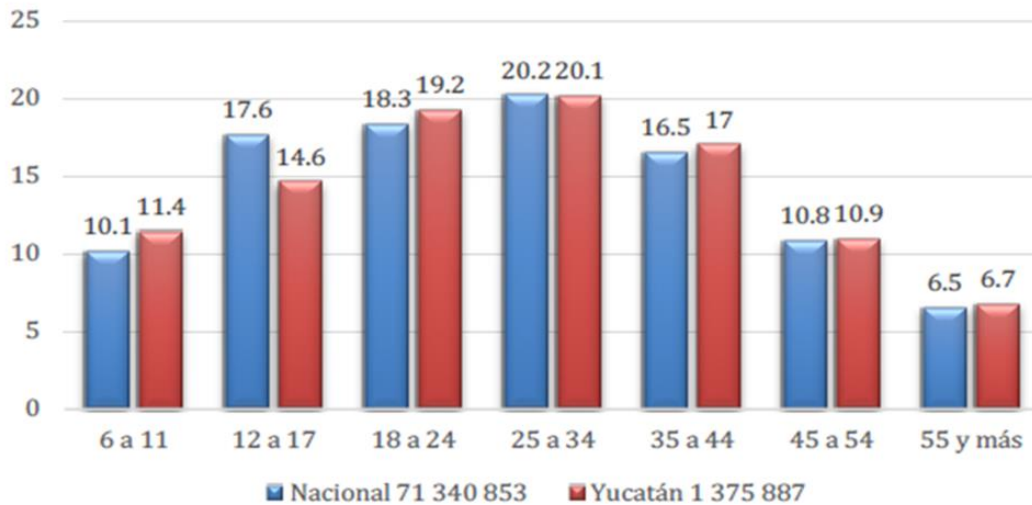


Fuente: Inegi (20 de febrero de 2018)

In the same context, various investigations (Delfino, Sosa and Zubieta, 2017; Domínguez Castillo, Cisneros Cohernour and Barberà, 2019; Domínguez Castillo, Cisneros-Cohernour, Suaste Escalante and Vázquez Carrillo, 2019; Domínguez, Vázquez, Suaste and Cab, 2016 ; Hatlevik, Guomundsdóttir and Loi, 2015) have shown that younger people use the internet more frequently and carry out more online activities. One of the most accepted justifications to explain this reality is that they are exposed from an early age to the use of these technologies, which makes them strengthen their digital skills.

In the case of Yucatán, according to Endutih 2017) (Inegi, 2017), the highest percentage of internet users (20.1% of total users) is located in the age group of 25 to 34, followed by the age group of 18 to 24 years (19.2%) (figure 3).

Figura 3. Porcentaje de usuarios de internet por edad (comparativa entre Yucatán y el promedio nacional)



Fuente: Inegi (2017)

Method

The present study is quantitative, since based on the measurement of the variables of interest in a given context, verifiable hypotheses were established using statistical techniques (Behar, 2008; Bernal, 2016; Gall, Gall and Borg, 2007; Tamayo, 2016). Likewise, it is non-experimental because the independent variables were not manipulated to identify effects on the dependent ones, but the information was taken as it was captured by the instrument designed for it; Finally, it is field because it was applied in the place where the study subjects were.

Population and sample

The population was made up of businesswomen from three rural communities in Yucatán. The sample size was obtained for a proportion of 60%, corresponding to the expected proportion of social entrepreneurs in stages 1 and 2 of technology adoption, for which a confidence of 95% and an estimation error of 10%, which - according to Anderson, Sweeney and Williams (2016) - is obtained by the following expression:

$$n = \frac{Z^2 \pi (1 - \pi)}{E^2}$$

With the values considered, the sample was made up of 92 entrepreneurs from three areas of the interior of the state of Yucatán, in the southeast of Mexico: 34 from municipality 1 (36.9%), 33 from municipality 2 (35.9%) and 25 from municipality 3 (27.2%). The participants were engaged in the artisan manufacture of clothing, food, home decorations and toys. The inclusion criteria to make up the sample were as follows: female gender, who had their own business and who actively participated in the project financed by the Sectorial Development Fund of the National Institute of Women (Inmujeres) and the National Council of Science and Science. Technology (Conacyt). Table 2 shows the ages of the participating women - from under 20 years of age (5.4%) to over 60 years of age (7.6%).

Tabla 2. Distribución de las participantes por grupo de edad

Estrato de edad	N	%
Menos de 20 años	5	5.4
De 20 a 29 años	18	19.6
De 30 a 39 años	29	31.5
De 40 a 49 años	24	26.1
De 50 a 59 años	9	9.8
De 60 años y más	7	7.6
Total	92	100.0

Fuente: Elaboración propia

Instrument

The instrument used was aligned with the proposed objectives and had as a conceptual basis the work carried out in the area, such as the basic questionnaire used for the National Survey on Availability and Use of ICT in Homes (Endutih 2017) —conducted by Inegi (2017) - and the basic questionnaire used for the National Micro-business Survey (Enamin 2012) - also conducted by Inegi (2012) -. Ultimately, the instrument was made up of five sections:

- Section I. Identification.
- Section II. Reasons to undertake.
- Section III. Family support.
- Section IV. Business performance.
- Section V. Assessment of skills in the use of ICT.

The reagents corresponding to this study were nested in said instrument. It should be noted that for the purposes of this research we worked with section V.

Regarding the sections, a Likert-type rating scale with one step and five response levels was used. The answers were issued considering an ascending numerical scale from 1 to 5; in turn, a semantic scale was added so that the participants were located at the level they considered appropriate, so that the answers obtained had the greatest certainty regarding the meaning of the numerical scale.

Technical indicators

Prior to administering the instrument for data collection, a pilot test was carried out to determine its reliability and validity; This was developed with the support of 30 women from the municipalities of Peto and Motul, selected for having the conditions of inclusion of the sample that would be participating. The results of this test allowed making the necessary adjustments to the instrument so that there was clarity and simplicity in the instructions and so that each of the reagents had a unique semantic orientation.

In Table 3, the results of the factorial analysis for the technology perception scale made it possible to establish the convenience of eliminating two pairs of bipolar adjectives; Likewise, three subsections or groupings of reagents were identified.

Tabla 3. Subdimensiones para la escala *percepción de la tecnología*

Subdimensiones	Pares de adjetivos
Subdimensión 1	Desagradable --- agradable Triste --- feliz No placentero --- placentero Tensa --- tranquila Incómodo --- cómodo Aburrida --- apasionante
Subdimensión 2	Vacía --- completa inaccesible --- accesible Estorbo --- ayuda
Subdimensión 3	Insegura --- segura Pesada --- ligera Lenta --- rápida Costosa --- económica Difícil --- fácil

Fuente: Elaboración propia

To verify the validity of the instrument, the exploratory and confirmatory factor analysis was applied for the content variables. To verify the relevance of the analysis, the Kaiser, Meyer and Olkin (KMO) coefficient of sample adequacy and Bartlett's sphericity test were obtained (the latter to corroborate that the variables associated with the items were related to each other around the factor).

Next, in table 4 the KMO statistic is presented, where the suitability of the correlation matrix for factor analysis is shown, the Bartlett test that provides evidence about whether the samples come from populations with the same variance and finally the percentage of explained variability.

Tabla 4. Resultados del análisis factorial para *percepción de la tecnología*

Subdimensiones	<i>KMO</i>	Prueba de Bartlett (<i>Valor p</i>)	% de variabilidad explicada
Subdimensión 1	0.804	< .001	66.9 %
Subdimensión 2	0.697	< .001	69.2 %
Subdimensión 3	0.683	< .001	52.0 %

Fuente: Elaboración propia

For the reliability of the instrument, considering that the items corresponding to the content variables presented an ordinal scale, Cronbach's alpha coefficient was used. This can be calculated from the correlations between the items considered using the following expression:

$$\alpha = \frac{NP}{(1 + P)(N - 1)}$$

As:

α is Cronbach's alpha coefficient.

N is the number of items considered.

P is the percentage of correlations between items.

Next, due to the characteristics of the ordinal type response format, Table 5 presents the results of the reliability indicator for the technology perception section. The results show indicators above .70, which indicates that the scale has an acceptable level of reliability.

Tabla 5. Alfa de Cronbach para la sección *percepción de la tecnología*

Subdimensión	Coefficiente alfa de Cronbach (α)
Subdimensión 1	0.894
Subdimensión 2	0.757
Subdimensión 3	0.761

Fuente: Elaboración propia

Results

The main results of this study are presented below. To begin with, it is important to mention that the business participants in this study were distributed in three locations: 34 in Peto (36%), 33 in Motul (35.9%) and 25 in Mérida (27.2%). It should be noted that there was also the participation of women who live in the surroundings of said municipalities and who were registered at the headquarters where the meetings were held. Table 6 shows (in percentages) the reasons why they do not have internet service at home.

Tabla 5. Razones por las que no cuentan con el servicio de internet en el hogar

Razones	Totalmente en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Totalmente de acuerdo
No lo considera necesario	42.9	28.6	14.3	7.1	7.1
No le interesa	35.7	26.2	21.4	9.5	7.1
Es inseguro	17.1	31.7	29.3	17.1	4.9
Tiene poca información para usarlo	12.2	17.1	14.6	31.7	24.4
El costo es elevado	19.0	16.7	16.7	28.6	19.0
No hay conexión en el municipio (comunidad)	52.4	28.6	4.8	9.5	4.8
La conexión en la (comunidad) es muy lenta	23.3	30.2	20.9	20.9	4.7

Fuente: Elaboración propia

In the table above, it can be seen that more than 56% affirm that they have little information to use the internet, which hinders their work and the strengthening of their skills. This result is consistent with the findings found in the works of Domínguez Castillo et al. (2019) and Domínguez Castillo et al. (2019), which explains the technical difficulties of

backwardness that women from rural communities of Yucatán have for the use of technologies. Likewise, it is highlighted that more than 47% affirm that the cost of having access to the internet service is very high, which is another of the compelling reasons that complicate the work of the company in communities located in marginalized areas. In addition, the women who have the service point out that the connection in the municipality is very slow. Finally, it is evident that the majority of women (more than 70%) consider that this tool is very important for their daily tasks. This last finding agrees with the conclusions of Domínguez Castillo, Alonso-Novelo and Quiñonez Pech (2020), who underline the possibility of helping the development of our peoples through the use of technologies, which would strengthen the indicators of education, trade and digital literacy.

Table 6 shows the behavior of the indicator related to the availability and frequency of use of smart / advanced devices. The results show that female entrepreneurs mainly use USB sticks, smartphones and tablets. On the other hand, the devices that they use the least are the iPhone and the iPod / MP3.

Tabla 6. Disponibilidad y frecuencia de uso de dispositivos inteligentes/avanzados

Equipo	Sí tiene	Frecuencia de uso (%)				
		Anual	Semestral	Mensual	Semanal	Diario
Smartphone	37.8	0.0	0.0	0.0	2.9	97.1
iPhone	2.2	33.3	0.0	0.0	0.0	66.7
iPod / MP3	3.4	0.0	0.0	0.0	50.0	50.0
GPS	21.8	11.8	11.8	23.5	17.6	35.3
Memorias USB	61.4	6.0	10.0	22.0	32.0	30.0
Consolas de juegos	10.1	33.3	11.1	0.0	44.4	11.1
Disco duro portátil	6.9	0.0	0.0	16.7	33.3	50.0
Scanner	13.8	7.7	0.0	46.2	23.1	23.1
Impresoras	17.9	0.0	7.1	28.6	21.4	42.9
Tablets / iPads	23.2	5.3	5.3	15.6	26.3	47.4

Fuente: Elaboración propia

Based on the data in the previous table, it can be ensured that a high percentage of female entrepreneurs have a smartphone, although it is not necessarily the latest generation. Also, the majority (6 out of 10) use portable digital devices to carry information and to manage the operation of their small businesses.

On the other hand, in table 7 the three main use activities that women entrepreneurs give to the smart devices they own are presented in order of priority. The results show that the most prominent activity is surfing the internet (70.8%).

Tabla 7. Uso de dispositivos inteligentes

Actividades	Sí lo realiza	Frecuencia de uso (%)				
		Anual	Semestral	Mensual	Semanal	Diario
Navegar en internet	70.8	0.0	1.7	6.9	25.9	65.5
Revisar el correo electrónico	49.4	2.3	2.3	9.1	27.3	59.1
Ver películas, fotos y escuchar música	66.3	0.0	0.0	7.0	22.8	70.2
Usar programas de contabilidad	13.6	0.0	7.7	61.5	15.4	15.4
Redactar textos en Word	48.3	0.0	4.9	24.4	36.6	34.1
Realizar cálculos en Excel	29.2	0.0	0.0	33.3	29.6	37.0
Diseñar con Photoshop Corel	20.5	0.0	11.1	33.3	27.8	27.8
Jugar en la computadora	20.5	0.0	0.0	25.0	25.0	50.0
Otros	9.1	0.0	0.0	0.0	0.0	66.7

Fuente: Elaboración propia

The table above shows that the second most performed activity is watching movies, photos, listening to music (66.3%), which could be understood as an action that reduces productivity. The third place is occupied by checking email (59.1%), an efficient means to receive and send information to customers and suppliers. It is striking, however, that using an accounting program has reached such a low percentage (13.6%), which is why it

constitutes an area of opportunity to have better control of income, expenses and other financial movements in their businesses.

Finally, table 8 shows the uses that women entrepreneurs give to the internet:

Tabla 8. Usos del internet y frecuencia de uso

Actividades de uso	Sí lo realiza	Frecuencia de uso (%)				
		Anual	Semestral	Mensual	Semanal	Diario
Obtener información / Navegar	68.5	0.0	0.0	5,1	28.8	66.1
Apoyar la educación / Capacitación	64,4	0.0	3.5	10.5	42.1	43.9
Realizar operaciones bancarias en línea	15.9	0.0	0.0	26.7	46.7	26.7
Entretenimiento	57.3	2.0	0.0	12.2	36.7	49.0
Interactuar con el gobierno	15.7	0.7	13.3	26.7	33.3	20.0
Relacionarse con otras personas: Skype, Twitter, Facebook, Instagram, Snapchat, Messenger	72.7	0.0	1.6	4.8	19.0	74.6
Enviar y recibir correo electrónico	50.6	4.5	0.0	15.9	25.0	54.5
Descargar música, videos, programas	43.8	0.0	5.1	30.8	30.8	33.3
Realizar algún tipo de compra <i>online</i> (Mercado Libre, E-bay, Amazon, supermercados, etc.)	18.0	12.5	31.3	31.3	12.5	12.5
Otros usos ¿cuáles?	0.0	50.0	0.0	0.0	0.0	50.0

Fuente: Elaboración propia

The table above highlights that 72.7% of the participants use the Internet to interact with other people: Skype, Twitter, Facebook, Instagram, Snapchat, Messenger (social networks), results that agree with those reported by Domínguez et al. (2019). Likewise, obtaining information / browsing stands out in second place with 68.5%, and in third place supporting education / training (64.4%).

Conclusions

One of the main contributions of this work consists in documenting the current state of use that women entrepreneurs in three rural areas of Yucatán give to the internet. As a first step to be able to carry out this analysis about rural women entrepreneurs, it was important to know the reasons why they do not have internet in their contexts, the availability and frequency of use of smart / advanced devices, the main activities of use of smart devices and the main uses they make of the internet.

Through this work it has been observed that despite the great difficulties that women have to face in terms of social inequalities between men and women in rural contexts, such as gender roles, the social pressure that exists on women regarding To the perpetuation of these roles, the sexual division of labor, lack of training and family cultural elements, highlight the need to support rural women entrepreneurs to empower them, promote social co-responsibility, technology and innovation.

Consequently, this study lays the foundations for government agencies, universities, civil associations and institutions that work in rural communities to focus their guidelines and efforts to launch a training and empowerment program for women entrepreneurs from rural communities in particular with the marketing their products with the support of technology that improve their income and their quality of life for themselves and their families. In the same way, it is necessary to develop an online platform to facilitate information with the beneficiaries of the service, the creation of networks, the documentation of good practices and the promotion of local electronic commerce. Likewise, promoting digital literacy programs for women from communities located in deep exclusion zones to support and encourage them to improve their skills in the use of technologies and better supervise their businesses and improve their quality of life to help them insert themselves into society. of information and knowledge. And as a final guideline, it is necessary to consolidate agreements with government agencies or funding agencies to continue investigating this phenomenon and that the results of similar investigations permeate women from communities located in marginalized rural areas.

This work once again highlights the poor employment situation of rural women, characterized by the lack of job opportunities and precariousness that leads to a complex panorama whose personal development is conditioned by an unequal structure, at a global level, in light of of the Sustainable Development Goals (SDG) 2030, highlights in this area

the urgency of taking firm action on the following objectives: “1. End poverty in all its forms and everywhere ”; “3. Guarantee a healthy life and promote the well-being of all at all ages”; “4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”; “5. Achieve gender equality and empower all women and girls ”; “ 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all ”. (UN, 2015). It is necessary to identify the needs and guarantee the rights of the most lagging and disadvantaged women, both socially and politically and economically, and thus guide policies, evaluate results and design specific development strategies based on different contexts and populations.

Discussion

The specialized literature on this subject (Ilie, Cardoza, Fernández & Tejeda, 2018; European Commission, 2013) is consistent in mentioning that despite the efforts made by women entrepreneurs, especially in rural contexts, there are still worrying levels of underrepresentation among the entrepreneur population. However, this work is aligned with some official documents such as that of the OECD (2018) entitled: Empowering women in the digital age. Where do we stand? attempted to provide evidence of how some variables associated with internet use can serve to support a new source of inclusive global economic growth. And at the same time it provided the conditions to open a dialogue for researchers to validate the results of their research with the results obtained in this study with the intention of increasing the little existing documentation about the role played by rural women entrepreneurs, the main challenges that they have to face from their contexts of high social vulnerability in terms of access to technologies and increase scientific contributions and statistical data that capture the existing gaps between men and women.

In the same way, governmental and non-governmental bodies, organizations and academics that develop projects aimed at improving the entrepreneurial conditions of women, whether urban or rural, are requested to take into consideration the results described in this study with the intention to improve the results obtained, facilitate their insertion into the knowledge society, improve the living conditions of them, their families and our peoples. As required by the State Development Program (2018-2024) for the State of Yucatán, where it is declared that with the intention of improving human development indices in women's income, it is intended to create coordinated strategies to: a) implement actions that favor competitive conditions for women entrepreneurs and job creators, b) promote an inclusive job market for

women with disabilities and older adults, c) promote actions for the benefit of women with a low educational level, single mothers, older adults or with disabilities for the benefit of their financial autonomy, and d) promote community networks of women producers and merchants that strengthen economic development.

With these actions contemplated in the official documents for the state of Yucatán and with the results that come from scientific studies published in high-impact journals, it is possible to advance in the contribution of improving the conditions for the participation of women entrepreneurs in the state of Yucatán. and thus advance in the solution of the existing problems that are exacerbated by the technological gap, social inequality and wage inequality.

Future lines of research

According to the findings, this study lays the foundations to analyze other lines of study that allow validating digital literacy and technical empowerment programs for women from communities located in deep exclusion zones with the intention of supporting and encouraging them to improve their skills. competences in the use of the internet and other non-conventional modalities related to the use of technology (technological platforms, digital marketing).

Likewise, there remains the possibility of conducting more in-depth studies to validate training programs in the use of devices that allow them to enhance their entrepreneurial capacity.

Another of the processes that this study reveals and that the COVID-19 pandemic has “uncovered” is the insufficient management of rural women who are beginning to participate in entrepreneurial actions with the management and payment processes of their online services, as well as their interaction with government agencies that can support them with a social program that allows them to access financing, which makes clear the need to deepen these areas of study.

Finally, despite the limitations of this study, it is intended to continue working in depth in the knowledge of the entrepreneurial processes of rural women, thus contributing to the improvement of the living conditions of these and of our peoples, gradually favoring their insertion in the information society and reducing existing digital gaps.

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