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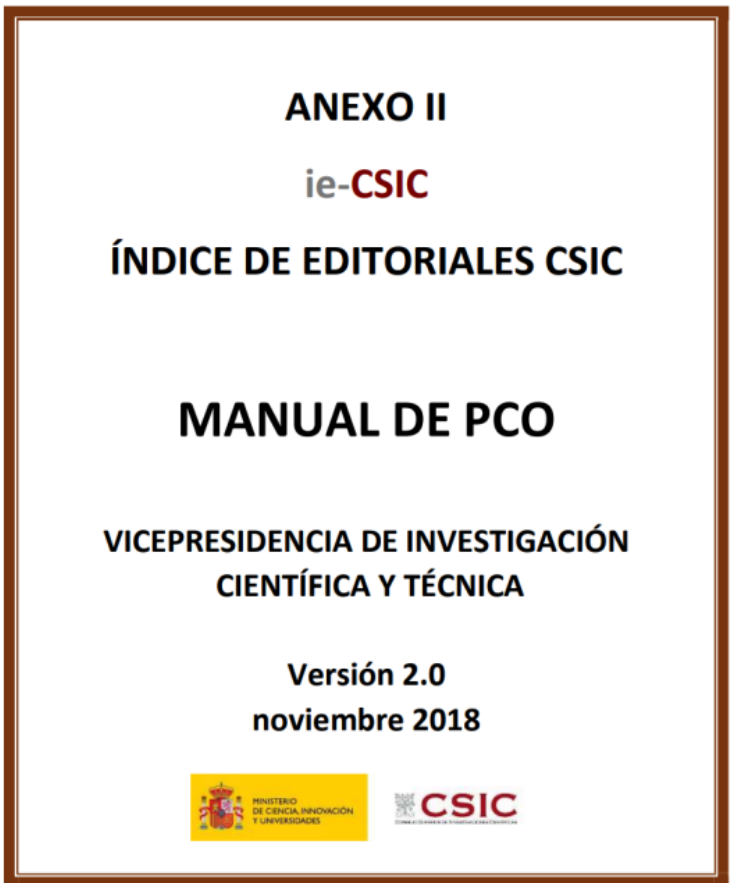

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Chapter 10
Business Model Innovation and Gender:
The Relationship With Digital Broadband and Sustainability in the Next Normal

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ABSTRACT

This chapter determines how digital broadband as the basis for remote work (DBD) and sustainability (SUS) influence the business model innovation for social impact startups by gender management (BMI) facing the post-COVID-19 pandemic ravages in emergent economies like Mexico to the next normal. The literature review applied the analytic hierarchy process to determine the model's factors and variables. The survey data was on 180 Mexican social startup CEOs as survivors in the second half of 2020. Confirmatory factor analysis and structural equation modeling were applied for the model's validity. Fuzzy set qualitative comparative analysis was extracted with different patterns solutions combinations of BMI factors: entrepreneurship profile, market knowledge, strategic analysis, key performance indicators, business plan, value proposition, the relationship with digital broadband as the basis for remote work, and sustainability eliciting business strategies.

INTRODUCTION

To face the COVID-19 crisis, government institutions, business chambers and academic centers have called for innovation initiatives, such as the launching of startups (CEPAL, 2020). However, in Mexico, 75% of startups closed their business after the second year of existence, which means that only 25% of them remain up-to-date (El Financiero, 2016).

The COVID-19 pandemic and the next normal have triggered and accelerated the shift to the automation and digitization revolution to the next normal. Approximately 39% to 58% of work worldwide in operationally demanding sectors can be automated using currently demonstrated technologies (McKinsey,

DOI: 10.4018/978-1-7998-7513-0.ch010

2020a). Simultaneously, due to their innovative nature of the SIS and their growth, these situations have created many female entrepreneurship opportunities. However, the mainstream literature on startups has elaborated the gender performance gap hypothesis (Demartini, 2018). Therefore, the challenge, usefulness, and originality of this research lie in the proposal of a framework and confirmation of every underlying factor, variable, and indicator involved in social impact startups managed by women in order to address emergency contexts (such as COVID-19 pandemic) and face the economic ravages in the next normal.

The Oslo Manual and the Business Model Innovation

The last edition Oslo Manual defines innovation (OECD, 2018, p.20):

"An innovation is a new or improved product or process (or a combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)."

Hence, here we adopted the concept of a SIS as a business model innovation that (OECD, 2018, p.242)*"…it relates to changes in a firm's core business processes as well as in the main products that it sells, currently or in the future"* based one or several sustainable development goals published by United Nations (UN, 2015).

The Meaning of the Social Impact Startup in Mexico

According to ASPEN (2017), in Mexico, are registered 416 startups, with more than half aimed to work with social impact interest; Mexico is the country where startup ecosystems are more distributed in its territory, with 32% of startups in Mexico City, 10% in Guadalajara, and 8% in Monterrey (OECD, 2016).

Unfortunately, the COVID-19 pandemic and the next normal ravaged that economic backbone by *failing to contain the loss of 12.5 million jobs in Mexico. The country's employed population fell* from 55.7 million in March to 45.4 million in April of 2020; this means 2.1 million formal jobs versus 10.4 million informal jobs (El Financiero, 2020).

Some innovative new SIS have responded quickly and flexibly to the pandemic, which is essential to help many countries switch to digital education, work, and health services provided innovations in medical goods and services (OECD, 2020). Additionally, the SIS concept is defined here as a startup that is aimed to solve one or several of the 17 sustainable development goals determined by the United Nations (UN, 2015).

Despite all of the above, most startups have a common denominator: they usually fail. Hence, this study aims to determine factors and indicators involved as a reliable business model innovation scale, capable of maintaining the successful momentum of the startups that respond quickly to market changes, focus on results, and deliver value to customers (McKinsey, 2020b).

The Role of Gender in the Management of the Social Impact Startup

Several studies have shown that there is no gender difference between the performance of firms (Johnsen & McMahon, 2005). However, other studies have pointed out that is gendered organizational performance. In this sense, firms owned by women are less successful than those owned by men (Shaw et al.,

2009). Women's companies are one of the fastest-growing groups and can make relevant contributions to the innovation, wealth creation and employment among entrepreneurs populations of all economies around the world (Demartini, 2018). They also provided self-employed response measures to overcome the crisis-hit individual economies and negative impacts, such as the COVID-19 pandemic and the next normal phenomena.

On the other side, men mainly use financial performance indicators to measure success (Moore & Buttner 1997).The differences in performance perception based on gender differences could explain the difference in entrepreneurial motivation (Pardo-del-Val 2010). One of the main stimuli for many female entrepreneurs is the entrepreneurial idea itself, not the economic achievement (Dhaliwal, 2009).

However, the relationship between differences in performance and gender is not unanimously accepted (Aldás-Manzano et al., 2012). The likelihood of failure of women's owned businesses was not higher than those owned by men; moreover, they were successful. The stereotypical male behaviors such as assertiveness, aggressiveness, self-confidence, and independence, besides the masculinization of entrepreneurship, bring serious difficulties to women who wish to engage in entrepreneurial activities (Aldás-Manzano et al. 2012). Constant comparison eventually becomes a trap. Researchers and society tend to ignore the complexity and variety of female entrepreneurs, and women become *"victims of the male norm"* (Billing 2011).

Some studies have challenged the traditional view of female inferiority complex in entrepreneurship, stating that women and men's firms will not show the apparent performance difference under the same starting resources (Johnsen & McMahon 2005). There are still income disparities and gender gaps in most societies; for instance, women tend to bring less management-related experience to their businesses. Multiple studies have provided empirical evidence that female managers pay less for economic goals than men and spend more time on social goals (Jennings & Brush, 2013).

Several studies have shown that women have certain advantages in specific management functions (mainly people-related management functions), which will lead to higher performance (Aldás-Manzano et al., 2012). The empirical evidence provided by other studies shows that there is no significant difference in performance between male and female entrepreneurs and even shows that their management performance and attitudes correspond in many aspects (Fernández-Guerrero et al., 2018). The existence of female entrepreneurs and their firms achieve social goals benefits in regional communities (Hanson, 2009).

The Role of Digital Broadband as the Basis for Remote Work and Sustainability for Social Impact Startups

One of the insights is the digital broadband as the basis for remote work (DBD) with factors, variables, and indicators based on the previous article published by Mejía-Trejo (2017c): *"Digital Broadband and Open Innovation: First Insights in Information Technologies Sector."*

The DBD is defined by the OECD (2008) as: *"typically used to denote an Internet connection with download speeds faster than traditional dial-up connections (at 64 kbit/s)",* and it is a key driver of economic growth and national competitiveness. Thereby, our model proposed here is based on the Mejía-Trejo (2017c) conceptual model, described in the following sections.

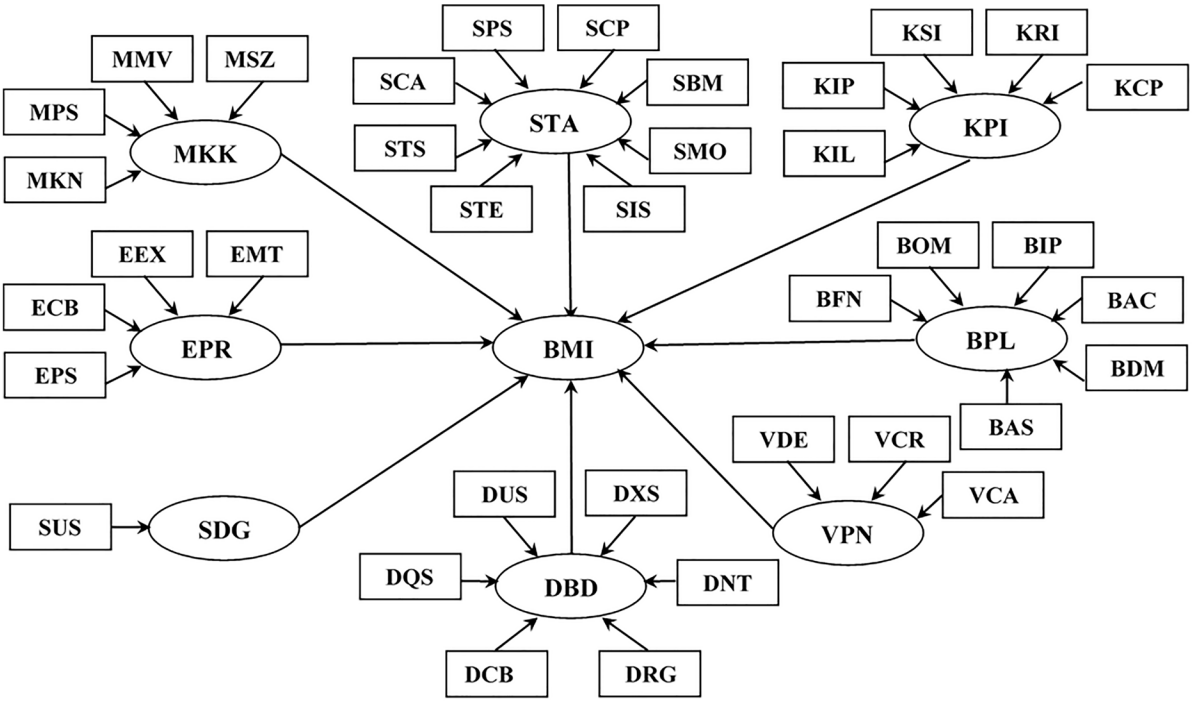
Table 1. Delphi Panel-Focus Group with AHP aimed to determine the main factors and variables of BMI and the relationship with DBD and SUS underlying factor

Objective	BMI. Business Model Innovation for Social Impact Startup Under Gender Management			
	ID	Names Suggested by three Social Impact Startups Professors (Academic Vision)		Weighing Suggested by Three Social Impact Startups CEOs (Expert Vision)
		Factors	Variables	AHP Weighing (%) Importance
Alternatives	1	EPR	EPS	31
	2		ECB	27
	3		EEX	26
	4		EMT	16
	TOTAL			100
	5	MKK	MKN	38
	6		MPS	32
	7		MMV	17
	8		MSZ	13
	TOTAL			100
	9	STA	SCA	24
	10		SPS	20
	11		SCP	15
	12		SBM	14
	13		SMO	9
	14		SIS	7
	15		STE	6
	16		STS	5
	TOTAL			100
	17	KPI	KIL	28
	18		KIP	25
	19		KSI	20
	20		KRI	17
	21		KCP	10
	TOTAL			100
	22	BPL	BFN	38
	23		BOM	28
	24		BIP	17
	25		BAC	8
	26		BDM	5
	27		BAS	4
	TOTAL			100
	28	VPN	VDE	38
	29		VCR	30
	30		VCA	32
TOTAL				100
	DBD. Digital broadband as basis to the remote work			
Objective	ID	Factors and variables are from Mejía-Trejo (2017c) conceptual model		
		Factors	Variables	AHP weighing (%) importance
Alternatives	31	DBD	DUS	Mejía-Trejo (2017c)
	32		DXS	
	33		DNT	
	34		DRG	
	35		DCB	
	36		DQS	
		SUS. Sustainability		
		Factors and variables are for 17 Sustainable Development Goals (UN, 2015)		
	37	SUS	SDG1…SDG17	UN (2015)

Notes: **BMI.** Business model innovation for social impact startups under gender management. **EPR.** Entrepreneur Profile; **MKK.** Market Knowledge; **STA.** Strategic Analysis; **KPI.** Key Performance Indicators; **BPL.** Business Plan. **VPN.** Value proposition; **EPS.** Entrepreneur personality; **ECB**. Entrepreneur category of business; **EEX** Entrepreneur experience**; EMT.** Entrepreneur motivation; **MKN.** Market needs; **MPS.** Product/Service attributes**; MMV.** Market management by values**; MSZ.** Market size**; SCA.** Competitor analysis**; SPS.** Product/ Service design; **SCP.** Cost/Price; **SBM**. Business model; **SMO.** Managerial orientation; **SIS.** Innovation strategy; **STE.** Technology strategy; **STS.** Type of society; **KIL.** Product/Service innovativeness with value added level**; KIP.** Implementing performance of business plan **KSI.** Social impact by products/services; **KRI.** Satisfaction of product/service level; **KCP.** Customer profitability; **BFN.** Financial plan; **BOM.** Operation Maintenance & Emergency plan; **BIP.** Intellectual property plan; **BAC.** Accountability plan; **BDM.** Digital marketing plan **BAS.** Aftersales plan. **VDE.** Value Delivery; **VCR.** Value creation; **VCA.** Value capture. **DBD.** Digital broadband as basis of remote work; **DUS**. User; **DXS**. Access; **DNT.** Network; **DRG.** Regulation; **DCB.** Cost & Benefits; **DQS.** Quality of service. **SUS**. Sustainability; **SDG.** Sustainable development goal (1 to 17, UN, 2015)

Source: Own

Figure 1. Ex-ante proposal framework social impact startups under gender management (BMI) underlying factors.
Source: Own



In order to prevent the spread of the COVID-19 pandemic, half of the world's population is under lockdown, resulting in a large number of activities being moved from offices to residences. Although there are inefficiencies in the reliability of critical systems (such as energy systems), this unprecedented situation also reveals opportunities for enhanced sustainability (Kylilia et al., 2020).

Although the term *"remote work"* applies to many types of work and It can be explained in various ways, one of the most popular explanations is "*any activity that involves the processing of information and its delivery via a telecommunications link that is carried out away mainly or partly from the main premises of an organization"* (Felstead & Henseke 2017).

The last concept here is related to the social impact startups through the *"sustainable development goals"* (UN, 2015). These are a universal call to action to end poverty, protect the planet, and improve everyone's lives and prospects, everywhere. All United Nations Member States adopted the 17 Goals in 2015 as part of the 2030 Agenda for Sustainable Development, which set out a 15-year plan to achieve the Goals. Hence, we adopt the indicators of such sustainable development as agenda..

The Business Model Innovation for the Social Impact Startups

It was undertaken a bibliometric analysis using VOSviewer software on the SCOPUS and Web of Science databases. The aim was to search the meaning of the business model innovation design for social impact startup under gender management (BMI) and the relationship with the digital broadband as the basis

of the remote work (DBD) and sustainability (SUS) in the next normal. We made a qualitative study of this research, applying a Delphi Panel focus group and Analytic Hierarchy Process (AHP, Saaty, 1997).

This procedure implied the social impact startups specialists' intervention: three social impact startups professors (academic vision) and three CEOs leading social impact startups as specialists (expert vision) in the relationship with the digital broadband as a basis to remote work (DBD) and sustainability (SUS) as a conceptual construct model. The results are depicted in Table 1.

Finally, the questionnaire design is based on the definition of constructs and sources in the literature (Mejía-Trejo, 2019c). This is shown in Appendix 1.

Describing the Final Conceptual Model Proposal

Figure 1 shows the underlying factors proposal framework of social impact startups by gender management (BMI).

RESEARCH METHOD

Stage 1

Covariance-Based Structural Equation Modeling (CB-SEM) using EQS6.2 software to prove the model's validity. CB-SEM specifies a *"measurement model",* which describes how the measured variables *"reflect certain latent variables."* Once these measurement models are considered satisfactory, researchers can explore path models (called *"structural models"*) that link *"latent variables"* (Thompson, 2004).

Stage 2

A complementary statistical technique was used, the fuzzy set Qualitative Comparative Analysis (fsQCA 3.0), to extract and analyze several patterns solutions. It is described as follows:

1. ***Necessary and sufficiency condition analyses.*** The fsQCA combines qualitative comparative analysis (QCA) with fuzzy sets and logic principles (Ragin, 2008). We applied the fsQCA 3.0 program, which recognizes the pattern of elements that led to the selected result (Mejía-Trejo, 2020). Since this technique produces multiple configurations (solutions), it contains *"sufficient"* and *"necessary"* conditions (may exist or not in the solution) that can be marked by their existence, nonexistence, or *"irrelevant"* conditions. A threshold of 0.9 is required for a condition to be *"necessary"* (Schneider & Wagemann, 2010).The *"sufficiency"* in a condition is based on the *"principle of causal asymmetry"* which establish *that "the presence of a factor may lead to a certain unique outcome, but the absence or negation of the same factor may not lead to the absence or negation of that outcome"* (Ragin, 2008).
2. ***Calibrating the raw data.*** This means all raw data transformation of factors into fuzzy sets (values ranging from 0 to 1) (Ragin, 2008). Data calibration can be *"direct"* (to calibrate all data values researchers select, as anchor values, three qualitative thresholds) or *"indirect"* (researchers decide to determine the factors to be calibrated after qualitative evaluation). The qualitative thresholds in the direct method correspond to *"full, non-full, and intermediate membership."* (Ragin, 2008).

Table 2. CFA-SEM results or internal consistency and convergent validity of latent variables in the theoretical model for social impact startups female managers

Factor	Id	Theoretical Model Consistency and Convergent Validity						Theoretical Model Discriminant Validity							
		Variable	Factorial Charge	Robust *t* Value	Cronbach's Alpha (>=0.7)	CRI (>=0.7)	AVE (>=0.5)	EPR	MKK	STA	KPI	BPL	VPN	SDG	SUS
1.EPR	1	EPS	0.776***	1.000a	0.739	0.756	0.528	0.528	0.45-0.77	0.56-0.89	0.33-0.58	0.78-0.92	0.45-0.66	0.33-0.69	0.48-0.72
	2	ECB	0.688***	9.765											
	3	EEX	0.696***	12.151											
	4	EMT	0.646***	10.182											
2,MKK	5	MKN	0.877***	1.000a	0.817	0.828	0.667	0.699	0.667	0.23-0.32	0.18-0.29	0.24-0.35	0.48-0.59	0.45-0.67	0.70-0.88
	6	MPS	0.785***	12.384											
	7	MMV	0.687***	14.198											
	8	MSZ	0.618***	16.872											
3,STA	9	SCA	0.766***	1.000a	0.883	0.895	0.599	0.569	0.491	0.599	0.18-0.32	0.25-0.35	0.19-0.33	0.25-0.45	0.38-0.56
	10	SPS	0.780***	13.294											
	11	SCP	0.801***	9.296											
	12	SBM	0.826***	11.439											
	13	SMO	0.740***	18.823											
	14	SIS	0.723***	16.333											
	15	STE	0.714***	17.023											
	16	STS	0.778***	9.456											
4.KPI	17	KIL	0.795***	1.000a	0.765	0.797	0.766	0.672	0.876	0.798	0.766	0.37-0.58	0.45-0.59	0.12-0.18	0.65-0.79
	18	KIP	0.894***	11.595											
	19	KSI	0.696***	12.295											
	20	KRI	0.769***	8.865											
	21	KCP	0.850***	7.454											
5.BPL	22	BFN	0.878***	1.000a	0.899	0.901	0.660	0.754	0.573	0.879	0.773	0.660	0.23-0.45	0.37-0.52	0.67-0.81
	23	BOM	0.701***	11.129											
	24	BIP	0.601***	6.554											
	25	BAC	0.828***	7.773											
	26	BDM	0.710***	10.965											
	27	BAS	0.610***	11.853											
6.VPN	28	VDE	0.878***	1.000a	0.717	0.788	0.766	0.854	0.876	0.698	0.773	0.870	0.766	0.34-0.48	0.56-0.71
	29	VCR	0.717***	7.876											
	30	VCA	0.700***	9.652											
7.DBD	31	DUS	0.876***	1.000a	0.865	0.890	0.567	0.831	0.761	0.843	0.667	0.654	0.790	0.567	0.19-0.31
	32	DXS	0.832***	9.987											
	33	DNT	0.767***	16.884											
	34	DRG	0.718***	18.992											
	35	DCB	0.708***	14.556											
	36	DQS	0.693**	19.765											
8.SUS	37	SUS	0.800***	14.652	0.712	0.737	0.682	0.789	0.837	0.672	0.760	0.851	0.757	0.687	0.682

Structural Relation	Standardized Coefficient ß	Robust *t* Value	Propositions
EPR -> BMI	0.788***	19..560	Higher **EPR** higher **BMI**. There are positive effects of **EPR** on **BMI**
MKK -> BMI	**0.849*** **	24.872	Higher **MKK** higher **BMI.** There are positive effects of **MKK** on **BMI**
STA -> BMI	**0.819*** **	22.875	Higher **STA** higher **BMI.** There are positive effects of **STA** on **BMI**
KPI -> BMI	**0.868*** **	24.663	Higher **KPI** higher **BMI.** There are positive effects of **KPI** on **BMI**
BPL -> BMI	**0.795*** **	26.895	Higher **BPL** higher **BMI.** There are positive effects of **BPL** on **BMI**
VPN->BMI	**0.701*** **	19.652	Higher **VPN** higher BMI. There are positive effects of **VPN** on **BMI**
DBD -> BMI	**0.871*** **	26.759	Higher **DBD** higher **BMI.** There are positive effects of **DBD** on **BMI**
SUS -> BMI	**0.842*** **	21.765	Higher **SUS** higher **BMI**. There are positive effects of **SUS** on **BMI**

S-B(Chi)square= 987.022; df=304; p<0.004; **NFI**=0.878; **NNFI**=0.802; **CFI**=0.891; **RMSEA**=0.091

a.- Parameters constrained to the value in the identification process. ***= p < 0.001.

About Theoretical Model Discriminant Validity, the diagonal represents the Average Variance Extracted (**AVE**), while above the diagonal part presents the variance (the correlation squared), below the diagonal is an estimate of the correlation of factors with a confidence interval of 95%.

Notes: **CRI.** Composite Reliability Index, **AVE.** Average Variance Extracted

Source: Own data using **EQS 6.2**

Table 3. Sufficiency condition analysis: complex configurations of intermediate solution indicating high BMI (Key Success Factors for Social Impact Startup) according to the CEO gender

Male management										
Solutions /Conditions	**EPR**	**MKK**	**STA**	**KPI**	**BPL**	**VPN**	**DBD**	**SUS**	**Raw Coverage**	**Unique Coverage**
1	●	●	●	⊗	⊗	●	●	●	0.989543	0.098898
2	●	●	●	⊗		●	●	●	0.767932	0.008055
3	●	●	●			●	●	●	0.675677	0.007991
4	●	●			⊗	●	●	●	0.657333	0.006979
5	●			⊗	⊗	●	●	●	0.657330	0.005877
6	●	⊗		⊗	⊗			●	0.598745	0.003655
7	●		⊗					●	0.389555	0.002766
8	●							●	0.297779	0.001659
Overall Solution Coverage			0.815929							
Overall Solution Consistency (>0.75)			0.761830							
Frequency cutoff			1							
Consistency cutoff (>0.75)			0.780128							
Female management										
Solutions /Conditions	**EPR**	**MKK**	**STA**	**KPI**	**BPL**	**VPN**	**DBD**	**SUS**	**Raw Coverage**	**Unique Coverage**
1	●	●	⊗	●	●	●	●	●	0.907650	0.099764
2	●	●		●	⊗	●	●	●	0.887012	0.009078
3	●	●	⊗			●	●	●	0.736782	0.008763
4	●				⊗	●	●	●	0.662876	0.007776
5	●	⊗					●	●	0.605673	0.006432
6	●		⊗			⊗	●	●	0.577661	0.005891
7				⊗		●	⊗	●	0.389551	0.004767
8			⊗			●		●	0.254122	0.006331
Overall Solution Coverage			0.871033							
Overall Solution Consistency (>0.75)			0.765011							
Frequency cutoff			1							
Consistency cutoff (>0.75)			0.752911							

Notes:

● Presence of a condition. ⊗ Negation of a condition

Core elements of a configuration are marked with large circles (this is the case here), peripheral elements with small ones (there is none here), and blank spaces indicate a do not care situation in which the causal condition may be either present or absent.

Source: Own data using fsQCA 3.0

3. ***Generating solutions through the truth table.*** Once the calibration is successful, the fsQCA activates the fuzzy algorithm to generate a solution that is a conditions combination supported on a high quantity of cases. The directive to be consistent is *"the combination leads to the outcome."* Hence, a *"truth-table"* of rows is generated, where *k* represents the number of outcome predictors.

Each row represents the observations quantity in each combination. The fsQCA uses the threshold of 0.5 to identify the combinations that are acceptably supported by the cases. The *"consistency"* is an exhibit for each combination in truth-table. It refers to the correspondence level among the sample cases sharing a configuration or a causal condition in displaying an outcome-focused (Ragin, 2008; Fiss, 2011).

Stage 3

This study was based on SIS CEOs participants (620 questioned as the total of them; finally, 180 answered) were asked to answer the questionnaire created to remind their perceptions (see Appendix 1). The participation was voluntary, confidential with no reward for the participants, and using survey monkey forms from Jul-01 to Dec-15, 2020. The sample consisted in subjects with >40 years old (78%); male/female (50%/50%); marital status couple (78%); postgraduate (50%).

RESULTS

The CFA-SEM Conceptual Model Measurement Validity

The measurement scale's validity used the CFA-SEM with EQS 6.2 software applying the maximum likelihood method (Byrne, 2006; Mejía-Trejo, 2020). To prove the measurement scales' reliability, we computed for each factor the Cronbach's Alpha and Composite Reliability Index (CRI) (Bagozzi & Yi, 1988) with results that exceeded the recommended value of 0.7 for both. This means that there is evidence to prove the scale's internal reliability (Nunnally & Bernstein, 1994; Hair et al., 2010). Average Variance Extracted (AVE) is represented from the fundamental construct and the observed variables (Fornell & Larcker, 1981). See Table 2.

fsQCA Findings

The necessary and sufficiency conditions analyses based on fsQCA3.0 software show findings according to the CEO's gender as configurations for high KSF (key success factors) for SIS. See Table 3.

SOLUTIONS AND RECOMMENDATIONS

Theoretical Implications

The CFA-SEM factor loadings results (see Table 2) supports the following results, determining *"gender-based difference"* (GBD) and *"no gender-based difference"* (NGBD) as follows:

Entrepreneur profile (EPR, 0.788***). It is influenced by the *"entrepreneur personality"* (EPS, 0.776***) more willingness to the *"conscientiousness"* (Poropat, 2009) vs. *"openness to experience"* of male management. We found that the results are very similar for both genders, and it is an NGBD.

As the *"entrepreneur category of business"* (ECB, 0.688***), it is aligned for *"social proposes with sustainable development"* (Leptoure et al. 2011; UN,2015) is the same for both genders. It is an NGBD.

About "*entrepreneur motivation"* (EMT, 0.646***), *"entrepreneurship's main motivation"* for female management, we found the *"necessity (survival sentiment)"* (Olugbola, 2017; Fernández-Guerrero, et al., 2018) vs *"opportunity (achievement sentiment)"* in the male management. About the *"results are more important than processes"* and *"self-confidence to overcome failure"* female management put a higher emphasis on the process itself, it is less optimistic, it has less self-confidence and higher fear of failure. At the same time, men focus more on results (Aldás-Manzano et al. 2012). It is an GBD.

In the field of *"entrepreneur experience"* (EEX, 0.696***), the female management has less business experience than men; men management considers essential the *"previous experience"* to start any entrepreneurship *faster than others* (Fernández-Guerrero, et al., 2018). About innovative behaviors, women are generally thought to be less confident than men of their ability to succeed in business and thus less innovative. Some studies also found that self-confidence, ability to set goals, or overcome difficulties in risky situations, would partially explain why female-owned businesses are less successful than males (Johnson & Powell, 1994). Besides, lower work experience, even less prior work experience in a social impact startup business, has been suggested to explain under performance of female-owned businesses (Fairlie & Robb, 2009). It is a GBD.

The question that should be addressed is why women-owned firms are in fact smaller. The reason may not be an implicit desire of females to own small firms. Moreover, there is no significant gender differences in terms of the desired future size of their firms (Fernández-Guerrero, et al., 2018). It is an NGBD.

Market knowledge (MKK, 0.849***). This context is mainly influenced by *"permanent surveillance of market needs based on*: *segmented market needs"* (MKN, 0.877***) (Balanko-Dickson, 2007; Osterwalder & Pigneur, 2010). It is an NGBD.

Regarding the *"product/service attributes"* (MPS, 0.785***), they monitor the *"correct attributes to incorporate into their product/service to satisfy consumers' needs exceeding their expectations, earing the voice of the customer based on*: *value proposition"* (Balanko-Dickson, 2007; Osterwalder &Pigneur, 2010). It is an NGBD.

This behavior leads to *"market management by values"* (MMV,0.687***) with *"value-based innovation surveillance on: business model innovation"* (Mejía-Trejo & Rodríguez-Bravo, 2019). It is an NGBD.

Finally, to *"ensure that all the customer's needs, they permanently calculate the market size by: value"* (MSZ, 0.618***) (Balanko-Dickson, 2007; BRW, 2016; Okrah et al., 2018). It is an NGBD.

Business plan (BPL, 0.795***). The most important variable is the financial plan (BFN, 0.878***), considered by the social impact startups for *"every new or innovated product/service to calculate the: return of investment"* and the main source to finance new entrepreneurship is based more on *"crowdfunding"* (Balanko-Dickson, 2007; Mejía-Trejo, 2019b). Around 65% of female management social startups declared to have received investment capital by means of crowdfunding, compared with 70% of men management startups that prefer bank loans. Female management are less likely to receive funding, receive lower amounts when they receive financing, and have a lower probability of successful exit when other factors are controlled. Female management appears to be significantly less likely to receive funding and. When female management does, the amount received is substantially lower than male management; the probability of acquisition is also lower for start-ups having at least one woman among the managers. In Mexico and in recent years, when woman-led investors are involved, the start-ups with female managers receive more funding for government funding programs. However, it must be noted that the share of female investors is relatively low. At the same time, the gender gap in entrepreneurship is striking and persistent, with men being on average seven times or more likely to be startup managers than women.

It is widely accepted that women entrepreneurs start their businesses with significantly less (typically only one-third) of the financial capital invested by their male counterparts (Stevenson, 2002). Such scarcity of initial capitalization burdens the business performance. There is no general agreement about how to explain this gendered funding pattern. Reasons provided range from sexual stereotyping and discrimination (Buttner & Rosen 1988), women's lack of personal assets and credit track record, women's inability to penetrate informal financial networks, and a higher demand for collateral requirements (Orphan, 2001), among others. Hence, it is a GBD.

In the context of the accountability plan (BAC, 0.828***), it is essential to operate an accountability plan, in favor of the social impact startup, to boost innovations keeping permanent surveillance in the *"evaluation of accountability results"* (Blaguescu et al., 2005; O'Connor & Mock, 2020). It is an NGBD.

About the *"digital marketing plan"* (BDM, 0.710***), it is *"essential to design a web campaign, driving product features and service mix, boosting*: *satisfaction"* (Mejía-Trejo, 2017a; 2017b; Piñeiro-Otero & Marínez-Roldán, 2017). It is an NGBD.

In the case of *"For us, a digital marketing plan is essential to design a network to increase relationships for the entrepreneurship",* male management has more significant network advantages, including more trusting relationships and greater reciprocity. Male entrepreneurs are better positioned to manage networking more effectively, even though women are more involved in networking in quantitative terms (Greve & Salaff, 2003). Female management advantages would arise from spending more time networking, being more engaged in conducting market research and performing better in strategic planning, leading change (Greve & Salaff, 2003), and innovation (Mejía-Trejo, 12017a). It is a GBD.

Regarding the *"operation maintenance & emergency plan"* (BOM, 0.701***) the "*key tenet is to know how to proceed both in regular and in contingency times to be more competitive"* (Balanko-Dickson, 2007; Hyvonen, 2014; García-Paucar et al., 2015). It is an NGBD.

In the sense of *"aftersales plan"* (BAS, 0.610***) it is essential to "*retain the customers in the entrepreneur business plan using social media"* (Barkawiet, et al., 2020). It is an NGBD.

Finally, as an *"intellectual property plan"* (BIP,0.601***), it is vital to *"engage the intellectual property with the resultant innovations"* (Baran & Zhumabaeva, 2018).

The female-led innovative social impact startups are less likely than the others to own a registered patent and have lower equity than their male counterparts (Demartini, 2018). It is a GBD.

Strategic Analysis (STA, 0.819***). The main variable influence is *"business model"* (SBM, 0.826). This variable pinpoint where the main proposal aims to *"produce more benefits increasing the live quality to the individuals and the society based on sustainable tenets"* for male management (Balanko-Dickson, 2007; Dessyana & Riyanti, 2017; Osterwalder & Pigneur, 2010; Mejía-Trejo, 2019a).The opposite, is the female management that focuses on their teams' development more intensively than men; they would show a higher level of empowerment in their businesses and encourage their employees' achievements and perseverance to a higher degree (Fernández-Guerrero, et al., 2018). It is a GBD difference. The teams that include female managers in the second or third place, they have a performance almost identical to male-only teams (Demartini 2018). It is a GBD.

Other important this factor is the *"Cost/Price"* (SCP, 0.801***). The social impact startups "*care about customer perceived value as a relationship of costs/prices of products/services supported by other value-added as the result of studies to fix prices for product-quality leadership"* It is an NGBD.

The social impact startups make studies to determine costs computing total *"customer cost/ benefit"*according to *"permanent analysis of competitors' costs/prices to keep them balanced and competitive"* and with *"permanent review to keep enough earnings by incomes"* (Kotler et al., 2017). The

earnings growth, as an indicator of performance, is related to experience, innovation, and confidence for both men and women. It is an NGBD.

Another essential variable around the factor, is *"product/service design"* (SPS, 0.780***), which analyzes *"permanently analyze to evolve our products/services design through the questioning of: Does it have enough correspondence with the attributes required to the market needs?"* (Balanko-Dickson, 2007; Kotler et al., 2017; Mejía-Trejo 2019a). It is an NGBD.

It is interesting to follow the next variable with influence on the factor, this is, *"type of society"* (STS, 0.778***), where they prefer to undertake entrepreneurship more willingness to *"for-profit social enterprise: from 50% to 67% of its financing derives from its resources"* (Fernández-Guerrero, et al., 2018). It is an NGBD.

The *"competitor analysis"* as the las variable with influence (SCA, 0.766***); the CEOs of social impact startup are permanently analyzing the competitors *"through the development of abilities to identify faster the customer needs"* (Balanko-Dickson, 2007; Mejía-Trejo. 2019a). We found that the results are very similar for both genders; and it is an NGBD.

The *"managerial orientation"* (SMO, 0.740***) is still based on *"cost reduction rather than investment"* (Ibarra et al., 2020), we found that the results are very similar for both genders, and it is not a gender-based difference. About *"innovation strategy"* (SIS, 0.723***) is promoted by *"people´s knowledge and initiatives"* for female management and *"the involvement of customers in the innovation processes"* for male management (Ibarra et al., 2020). It is a GBD.

The variable *"technology strategy"* (STE, 0.714***) is based on *"follow which technologies our competitors use."* (Ibarra et al., 2020). It is an NGBD.

Key performance (KPI, 0.868***). The first variable with influence on this factor, considering its design, implementing and frequently measure, is *"the implementing performance of business plan advance as key performance indicator according to the norms and schedule"* (KIP, 0.894***). The *"customer profitability"* (KCP, 0.850***) the "*relationship of products/services innovativeness with value-added level"* (KIL,0.795***), the "*satisfaction of product/service level"* (KRI, 0.769***) and finally, "*the social impact by products/services"* (KSI,0.696***) both according to the business plan (Balanko-Dickson, 2007; Mocker et al., 2015; Parmenter, 2010; Kotler et al.,2017). It is an NGBD.

Value proposition (VPN, 701***). This factor has the relevant variables *"value delivery"* (VDE, 0.878***), *"value creation"* (VCR, 0.717***) and *"value capture"* (VCA, 0.700***) (Ibarra et al., 2020) where the social impact startups in the last 3 years are showing: *"expanded our activity to new customer segments", "established new collaborations with third parties that have allowed us to optimize and improve our value proposition and/or business model"* and *"pricing mechanism"*. It is an NGBD.

Digital broadband as the basis to remote work (DBD, 0.871***). This is a factor proposed by the Mejía-Trejo (2017c) conceptual model. The results are the user (DUS, 0.876***) where is "*on permanent surveillance of security & privacy of protocols & standards that support the DBD of your innovation ecosystem";* about the *"access"* (DXS, 0.832***) is considered *"better with mobile technologies"*; the *"network"*(DNT, 0.767***) is considered *"as network speeds, you appreciate a correct variation in speed (User's general perception of the variation of service speed (jitter, zapping delay, etc.))";* about the practices of regulation in the country (DRG, 0.718***) the indicator *"business and regulatory environments are balanced"* is the most relevant. The *"cost & benefits"* (DCB, 0.708***) the social impact startups believe *"the monthly cost of broadband subscription, is too expensive*, and finally the *"quality of service"* (DQS, 0.693***) has a remarkable *"sustainability"* to create and keep on a solid business and innovation ecosystem. It is an NGBD.

Sustainability (SUS, 0.842***). This factor is based on the sustainable development goal variable (UN, 2015) and the social impact startups asked are willing to more than two goals, being: *"industry innovation and infrastructure"* and *"responsible consumption and production"*. It is an NGBD.

3. **Stage 5.** Based on the **fsQCA,** when researchers allow for *"equifinality"* and *"causal complexity"* (Ragin, 2008), a common finding is that several different combinations of causal conditions (in our case, male/female management) may result in a given outcome. These combinations are for the outcome, generally understood as alternate causal paths or *"recipes"*.

H. *No single configuration of entrepreneur profile (EPR); market knowledge (MKK); strategic analysis (STA); key performance indicators (KPI); business plan (BPL); digital broadband as the basis to remote work (DBD); sustainability (SUS) is sufficient for explaining high business model innovation design for social impact startups by gender management (BMI) that elicit strategies business in the next normal.; instead, multiple, equally effective configurations of causal factors exist.* It is affirmative, being the best combination of the one shown on Solution 1/ Eq. 1 for male management and Solution 1/ Eq.2 for female management, described as:

[EPR*MKK*STA*~KPI*~BPL*VPN*DBD*SUS]->BMI (1)

[EPR*MKK*~STA*KPI*BPL*VPN*DBD*SUS]->BMI (2)

Practical Implications

The research findings provide useful implications for academics, business model innovation managers, professional practitioners of innovation activities, and gender studies about BMI and the relationship with DBD and SUS as business strategies for the next normal. Suppose they use the conceptual model proposal here implemented and proved in social impact startups, under emergency context (like COVID-19 and the next normal) in an emergent country. Our model could obtain new insights on how the combinations of the variables entrepreneur profile (EPR); market knowledge (MKK); strategic analysis (STA); key performance Indicators (KPI); business plan (BPL), value proposition (VPN), as business model innovation for social impact startups under gender management (BMI) and the relationship with the digital broadband as the basis to remote work (DBD) and sustainability (SUS) as business strategies for the next normal in several environments and countries. These results help establish permanent business innovation activities to be adopted by firms economically affected by such context emphasizing the gender management.

FUTURE RESEARCH DIRECTIONS

One of them is the industry and the SIS sectors as sources of information. Not all of them are accessible to provide information under identical conditions and times. Second, the results consisted of a questionnaire of self-reported data to remind their perceptions. Further studies could combine this questionnaire

with survey data from direct semi-structured interviews and direct observations of specific SIS from other emergent countries. Third, future investigations may also include other different factors, variables, or indicators as BMI and the relationship with DBD and SUS as business strategies for the next normal in other kinds of social impact startups, for instance: the country, the region, the influence of public policies, the grouping of CEOs by age, education level, incomes level, status family (divorce, couple, etc.). For female managers, the decision to get married, the decision to become a mother in her life (or *"mum-entrepreneur"*), etc., which could offer more useful information.

CONCLUSION

1. 1. There is a single best variable combination, considered as BMI and the relationship with DBD and SUS that elicit strategy business improvement for the next normal and it is composed of eight factors: entrepreneur profile (EPR), market knowledge (MKK), strategic analysis (STA), business plan (BPL) and key performance indicators (KPI), digital broadband as the basis to remote work (DBD) and sustainability (SUS). There are 37 indicators characterizing these factors about if they are male or female management. The equations are depicted as the following expressions:

Male management: [EPR*MKK*STA*~KPI*~BPL*VPN*DBD*SUS]->BMI (1)

Female management:[EPR*MKK*~STA*KPI*BPL*VPN*DBD*SUS]->BMI (2)

2. For male management, there are initially eight necessary conditions: EPR, MKK, KPI, BPL, DBD, SUS with negation of the values of KPI.
3. For female management, there are initially eight necessary conditions: EPR, MKK, KPI, BPL, DBD, SUS with negation of the values of STA or BPL.
4. We determined several variables that were or *"gender-based difference"* (GBD) or *"no gender-based difference"* (NGBD) that deserve further studies and analyses.

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APPENDIX

Table 4. Questionnaire designed on literature review with operational definition of constructs

BMI. Business model innovation for social impact startup under gender management. Conceptual Construct Model				
Factor	**Variables**	**Item**	**Indicators. [Respond according to Likert Scale 1-5: 1 – Not at all aware; 2 – Slightly aware; 3 – Somewhat aware; 4 – Moderately aware; 5 – Extremely aware. Questions are in third person.]**	**Authors**
Entrepreneur Profile (**EPR**)	Entrepreneur personality (**EPS**)	**1**	We perceive our personality trait as an entrepreneur like: • Openness to experience • Conscientiousness • Extraversion • Agreeableness • Neuroticism	Poropat (2009)
	Entrepreneur category of business (**ECB**)	**2**	Our entrepreneurship has more willingness to: • Income and commercial reasons • Social proposes with sustainable development	Leptoure et al. (2011); UN (2015)
	Entrepreneur experience (**EEX**)	**3**	For us, it is essential: • The previous experience to start any entrepreneurship faster than others • The innovative behaviour • Increasing the size of the startup along the lifetime	Fernández-Guerrero, (et al., 2018)
	Entrepreneur motivation (**EMT**)	**4**	Our entrepreneur motivation is more willingness to: • Opportunity (achievement sentiment) • Necessity (survival sentiment) • The results are more important than processes • Self-confidence to overcome the fear of failure	Aldás-Manzano (2012); Olugbola (2017); Fernández-Guerrero, (et al., 2018)
Market knowledge (**MKK**)	Markets needs (**MKN**)	**5**	We permanently surveillance the market needs where we are serving through the identification of: • Mass market • Segmented market • Diversified market • Multi-sided markets	Balanko-Dickson, (2007); Osterwalder & Pigneur, 2010; Majava et al. (2014); Ibarra et al. (2020)
	Product/Service attributes (**MPS**)	**6**	We permanently surveillance of the correct attributes where we are serving through to incorporate, into the product/service to satisfy consumers' needs exceeding their expectations, earing the *"voice of the customer"*: • Right attributes • Value proposition • Superior value-delivery system • We systematically observe and evaluate the needs of our customers. • We analyze the actual use of our products/services.	Balanko-Dickson, (2007); Osterwalder & Pigneur (2010); Ibarra et al. (2020)
	Market management by values (**MMV**)	**7**	We permanently surveillance of our value-based innovation through the identification of: • CEOs/Stakeholders • Business model innovation • Process/product-service	Mejía-Trejo & Rodríguez-Bravo (2019)
	Market size (**MSZ**)	**8**	To ensure that we meet all the needs of our customers, we permanently calculate the market size by: • Volume • Value • Share	Balanko-Dickson, (2007); BRW(2016); Okrah (et al., 2018)

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Table 4. Continued

BMI. Business model innovation for social impact startup under gender management. Conceptual Construct Model				
Factor	**Variables**	**Item**	**Indicators. [Respond according to Likert Scale 1-5: 1 – Not at all aware; 2 – Slightly aware; 3 – Somewhat aware; 4 – Moderately aware; 5 – Extremely aware. Questions are in third person.]**	**Authors**
Strategic Analysis (**STA**)	Competitors analysis (**SCA**)	**9**	We permanently analyze the competitors through the development of: • Abilities to determine our market positioning faster than the competitors • Abilities to identify faster the customer needs • Abilities to innovate faster new products/services • Attract better employees than the competition • Abilities to identify faster the SWOT of competitors products/services • Abilities to observe and evaluate the needs of our customers	Balanko-Dickson, (2007); Mejía-Trejo (2019a); Ibarra et al . (2020)
	Product/ Service design (**SPS**)	**10**	We permanently analyze to evolve our products/services design through the questioning of: • Does it have enough correspondence with the attributes required to the market needs? • Is it easy to learn how to use? • Is it enough attractive in features and price to the customer? • Is it designed and developed cooperatively with suppliers and distributors? • If it is based on **B2B** (or any electronic business modality), is it enough designed to the customer`s requirements? • Is the design for products/services aimed to get emotional benefits to the customer? • Is the design for products/services aimed to get rational benefits to the customer?	Balanko-Dickson, (2007); Kotler (et al., 2017): Mejía-Trejo (2019a)
	Cost/Price (**SCP**)	**11**	We care about customer perceived value as a relationship of costs/prices of our products/ services supported by other value-added as the result of: • Studies to fix prices for: -Survival -Maximum current profit -Maximum market share -Maximum market skimming -Product-quality leadership • Studies to determine costs computing total: -Customer cost/benefit -Product-Monetary cost/benefit -Service-Time cost/benefit -Personnel-Energy cost/benefit -Image-Psychological cost/benefit -Customer retention rate -Cost of operation -Cost of branding -Variable & Fixed costs in design, engineering, manufacturing, sales, delivery, etc. • A permanent analysis of competitors' costs/prices to keep them balanced and competitive • A permanent review to keep enough earnings by incomes	Kotler (et al., 2017)
	Business model (**SBM**)	**12**	We believe that the main proposal of the business model is aimed to make more and better products and services based on: • More incomes and earnings to the stakeholders • Produce more benefits increasing the live quality to the individuals and the society based on sustainable tenets. • Development of the team-works around the empowerment, achievement and perseverance of the personnel • Ideas and concepts into detailed products, services, value propositions or business models • The combination of technology, market and business model knowledge in the idea generation and/or experimentation processes	Balanko-Dickson, (2007); Dessyana & Riyanti, (2017); Osterwalder & Pigneur, (2010); Ibarra et al. (2020)
	Managerial orientation (**SMO**)	**13**	Our strategic priorities in management have been oriented towards: • Cost reduction rather than investment (in R&D, capital, etc.) • The short term rather than the long term. • On low-risk projects rather than projects with greater potential but that entailed higher risks.	Ibarra et al. (2020)
	Innovation strategy (**SIS**)	**14**	We promote: • Creativity and innovation • People`s knowledge and initiatives • Open communication and interdepartmental exchange of information. • New concepts to test through prototypes and pilot tests before their final development • New ways of both creating value for our customers and capturing value from our innovations. • The involvement of customers in the innovation processes • The involvement of external partners • The collaboration with external partners	
	Technology strategy (**STE**)	**15**	We: • Keep up to date with promising new products/services and technologies. • Use different sources of information to identify opportunities related to new products/ services and technologies. • Follow which technologies our competitors use.	Ibarra et al. (2020)
	Type of society (**STS**)	**16**	We prefer to undertake an entrepreneurship more willingness to: • **NGO**. More than 95% of its income depends on donors • Non-profit social company. More than 67% of its income depends on donors. • Hybrid social enterprise: More than 5% of your income comes from the market • For-profit social enterprise: From 50% to 67% of its financing derives from its resources	Fernández-Guerrero, (et al., 2018)

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Table 4. Continued

BMI. Business model innovation for social impact startup under gender management. Conceptual Construct Model				
Factor	**Variables**	**Item**	**Indicators. [Respond according to Likert Scale 1-5: 1 – Not at all aware; 2 – Slightly aware; 3 – Somewhat aware; 4 – Moderately aware; 5 – Extremely aware. Questions are in third person.]**	**Authors**
Business key performance indicators (**KPI**)	Product/Service innovativeness with value added level (**KIL**)	**17**	We design, implement and frequently measure as key performance indicator the relationship of our products/services innovativeness with value-added level.	Balanko-Dickson (2007); Mocker et al., 2015; Parmenter (2010)
	Implementing performance of business plan (**KIP**)	**18**	We design, implement and frequently measure, as key performance indicator our business plan advance according to the norms and schedule.	
	Social impact by products/services (**KSI**)	**19**	We design, implement, and frequently measure as key performance indicator the social impact of our products and services according to our business plan	
	Satisfaction of product/ service level (**KRI**)	**20**	We design, implement, and frequently measure as key performance indicator the customer's satisfaction of our products and services according to our business plan	
	Customer profitability (**KCP**)	**21**	We design, implement, and frequently measure as key performance indicator: • Customers live-cycle value • Customer retention • Customer profitability	
Business plan (**BPL**)	Financial plan (**BFN**)	**22**	For us, for every new or innovated product/service, it is necessary to calculate: • Initial Cost • Balance sheet and income statement • Break-even point • Return of investment • Net present value For us, our main source to finance new entrepreneurship is based on: • Bank loans • Crowdfunding • Family and friends	Balanko-Dickson (2007); Mejía-Trejo (2019b)
	Operation Maintenance & Emergency plan (**BOM**)	**23**	For us, it is important the operation, maintenance & emergency plan to: • Identify resources and capabilities to do it by Own • Identify resources and capabilities to do it by Outsourcing • Have all the resources, capabilities, and processes entirely documented • The key tenet is to know how to proceed both in regular and in contingency times, being more competitive • Be certificated in every vital issue of work getting trust in customers and being more competitive	Balanko-Dickson, (2007); Hyvonen, (2014); García-Paucar (et al., 2015)
	Intellectual property plan (**BIP**)	**24**	For us, the intellectual property plan is centered to: • Engage them with the resultant innovations • Protect them legally as resulting innovations • Procure enough financial resources to register them	Baran, A. & Zhumabaeva, A. (2018).
	Accountability plan (**BAC**)	**25**	For us, it is essential to operate an accountability plan, in favor of the social impact startup, to boost innovations keeping permanent surveillance in: • Transparency • Participation • Evaluation of accountability results • Complaint • Response mechanisms • Responsiveness	Blaguescu, (et al., 2005); O'Connor& Mock (2020)
	Digital marketing plan (**BDM**)	**26**	For us, a digital marketing plan is essential to design a web campaign, driving product features and service mix, boosting for: • Awareness • Desire • Experience • Engagement • Loyalty • Satisfaction • Effectiveness on call to action For us, a digital marketing plan is essential to design a network to: • Increase relationships for the entrepreneurship • Conducting market research and performing better in strategic planning, leading change	Mejía-Trejo (2017a; 2017b); Piñeiro-Otero & Marínez-Roldán (2017)
	Aftersales plan (**BAS**)	**27**	For us, an aftersales plan is essential to retain the customers in the entrepreneur business plan using: • Telephone calls • CRM (Customer Relationship Management) • emailing • Social Media	Barkawiet (et al., 2020)

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Table 4. Continued

BMI. Business model innovation for social impact startup under gender management. Conceptual Construct Model				
Factor	**Variables**	**Item**	**Indicators. [Respond according to Likert Scale 1-5: 1 – Not at all aware; 2 – Slightly aware; 3 – Somewhat aware; 4 – Moderately aware; 5 – Extremely aware. Questions are in third person.]**	**Authors**
Value Proposition **(VPN)**	Value delivery (**VDE**)	**28**	In the last 3 years in our company we have: • Met new customer needs previously unmet by the market • Solved customer problems not solved by our competitors • Introduced new forms of value for customers • Introduced new forms of value for other partners (suppliers or distributors) • Diversified into new markets, targeting completely new customer types or new geographical environments • Expanded our activity to new customer segments	Ibarra et al (2020)
	Value creation (**VCR**)	29	In the last 3 years in our company we have: • Significantly modified the set of key activities of our business through the acquisition or elimination of certain activities or their internal and/or external reorganization, allowing us to be more efficient and improve our response • Established new collaborations with third parties that have allowed us to optimize and improve our value proposition and/or business model • Integrated clients, suppliers, distributors and other agents in innovative ways in relation to the delivery of products and services • Re-configured our value chain, allowing us to be more efficient and to respond better to all interested parties.	
	Value capture (**VCA**)	**30**	In the last 3 years in our company we have introduced new: • Ways to reduce costs. • Pricing mechanisms. • Ways to be profitable. • Revenue streams.	
Remote Work (RMW) Conceptual Construct Model				
Factor	**Variables**	**Item**	**Indicators. [Respond according to Likert Scale 1-5: 1 – Not at all aware; 2 – Slightly aware; 3 – Somewhat aware; 4 – Moderately aware; 5 – Extremely aware. Questions are in third person.]**	**Authors**
Digital Broadband **(DBD)**	User (**DUS**)	**31**	As user: • You're on permanent surveillance of security & privacy of protocols & standards that support the **DBD** of your innovation ecosystem. • You're prone to use open source very often to create web sites, blogs, podcasting, virtual communities, digital arts, apps, etc., facilitating the user-driven innovation to create new content; in other words, they are user-innovators and collectively develop new products • You're improving your own infrastructure and/or the last mile network	Mejía-Trejo (2017c)
	Access (**DXS**)	**32**	• Internet access is better with fixed technologies • Internet access is better with mobile technologies • As access in the last mile you appreciate an excellent coverage, time and speed of digital access technologies (fibre, DSL, WIMAX, LTE, PLC, UMTS HSPA, etc.) provided by the telecom operator	
	Network (**DNT**)	**33**	• As network speeds, you appreciate a correct variation in speed (User's general perception of the variation of service speed (jitter, zapping delay, etc.)) • As a network connection., you appreciate a correct connection availability (Availability of channels and/or ports designated to a specific service request) • As a network connection, you appreciate a correct connection stability (How well the connection is maintained without reconfiguring the user's network environment)	
	Regulation (**DRG**)	**34**	You appreciate about best practices of regulation in your country: • That business and regulatory environments are balanced. • Promoting the competition in digital model business • Protection of intellectual property about new contents, • A tendency to get universal service based on broadband	
	Cost & Benefits (**DCB**)	**35**	You believe: • About the monthly cost of broadband subscription, is too expensive • About maintenance costs of the internal infrastructure, is too expensive • About cost, the tablets and smartphones do everything online that you need, less expensive	
	Quality of service (**DQS**)	**36**	You believe about your quality of service has a remarkable: • Profitability • Sustainability • Affordability • Service level agreement To create and keep on a solid business and innovation ecosystem	

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Table 4. Continued

BMI. Business model innovation for social impact startup under gender management. Conceptual Construct Model				
Factor	**Variables**	**Item**	**Indicators. [Respond according to Likert Scale 1-5: 1 – Not at all aware; 2 – Slightly aware; 3 – Somewhat aware; 4 – Moderately aware; 5 – Extremely aware. Questions are in third person.]**	**Authors**
Sustainability (SUS)	Sustainable development goals (**SDG**)	**37**	Our social impact startup supports the efforts at least in two goals, being: **1.** No poverty **2.** Zero hunger **3.** Good health and well-being **4.** Quality education **5.** Gender equality **6.** Clear water and sanitation **7.** Affordable and clean energy **8.** Decent work and economic growth **9.** Industry innovation and infrastructure **10.** Reduced inequities **11.** Sustainable cities and communities **12.** Responsible consumption and production **13.** Climate action **14.** Life below water **15.** Life on land **16.** Peace, justice and strong institutions **17.** Partnerships for the goals	UN (2015)

Source: Several authors with own adaptation