

COVID-19 pandemic, a blessing or a curse for sales? A study of women entrepreneurs from Khyber Pakhtunkhwa community

Women
entrepreneurs
from Khyber
Pakhtunkhwa

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Abstract

Purpose – The coronavirus (COVID-19) pandemic has had profound economic effects, putting women entrepreneurs at considerable risk of losing income and sales growth as a result. This study aims to examine whether the COVID-19 pandemic is a blessing or a curse for women entrepreneurs in Pakistan's informal sector. The influence of business type, family support and other socio-economic factors on the sales volume of women's businesses is examined.

Design/methodology/approach – Data were collected from 400 women entrepreneurs using a survey questionnaire. Logistic regression was used to investigate the relationships between perceived sales volume and socio-economic as well as demographic factors of women entrepreneurs.

Findings – Findings for *RQ1* revealed that the pandemic was a blessing for cloth and cosmetic entrepreneurs, but a curse for those women selling dairy products. Results for *RQ2* showed that age, homeownership, household size, family support and type of business were significant predictors of sales. Furthermore, women entrepreneurs were greatly influenced by their family's desires and decisions, such that women entrepreneurs who received support from families and relatives reported higher sales than those who did not receive such support.

Practical implications – The results may assist policymakers in designing supportive programs to encourage women's informal entrepreneurial activities. Creating entrepreneurial ecosystems may provide support for women entrepreneurs beyond family support. The findings provide a better understanding of women's business effectiveness during COVID-19 pandemic. It reveals the resilience of women entrepreneurs in the face of cultural, economic and institutional constraints encountered during the pandemic.

Originality/value – This study is unique because it focuses on the impact of the pandemic at the household level rather than examining broad macroeconomic scenarios. To the best of the authors' knowledge, this study is the first attempt to explore the informal, home-based business sector of women entrepreneurs in Pakistan during the pandemic.

Keywords Socio-economic, Family support, Women entrepreneurship, Home-based business, Crises, COVID-19

Paper type Research paper

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Introduction

Women's entrepreneurship is a key driver of economic development and prosperity of the societies (Jafari-Sadeghi, 2020; Ramadani *et al.*, 2017; Morales-Alonso *et al.*, 2020; Muhammad *et al.*, 2020a). It contributes to higher living standards by alleviating poverty (Laffineur *et al.*, 2017) and generates employment opportunities (Estrada-Cruz *et al.*, 2020; Ramadani *et al.*, 2013; Mayasari and Chandra, 2020). It is also a factor influencing the independence, economic prosperity, resilience (Bakas, 2017) and well-being of women and families globally (Lepeley *et al.*, 2020). These concepts are in line with the United Nation's first sustainable development goal (income, social protection, economic resources and resilience) (UN, 2020). However, most of the women's entrepreneurial engagements in the developing and emerging countries center on the informal sectors (Melkani *et al.*, 2021) where women entrepreneurs lack legal, social and benefit protections (Webb *et al.*, 2020). This study examines the impact of the pandemic on women's home-based entrepreneurs in Khyber Pakhtunkhwa community, Pakistan focusing on perceived changes in sales volume, family support, socio-economic and demographic variables.

The pandemic has been called the "perfect storm" simultaneously causing demand, supply and financial shocks (Mohapatra, 2021; Triggs and Karas, 2020). Entrepreneurs have also experienced the economic shocks brought about by the COVID-19 pandemic (Muhammad *et al.*, 2020b). The pandemic outbreak has different financial implications for entrepreneurs worldwide, but the socio-economic impacts have been particularly severe for women (OECD, 2020) engaged in informal entrepreneurship. Many of these businesses are facing serious declines in their income and growth (Mohapatra, 2021). Identifying the ways in which small women-owned ventures in Pakistan have been affected during the COVID-19 pandemic requires further investigation.

Women's business engagement in Pakistan is low compared to other nations (Zeb and Ihsan, 2020). Most of these businesses are particularly vulnerable to shocks (Baird, 2020; Muhammad *et al.*, 2020a) from decreasing profitability and the tenuous nature of operating in the informal sector (OECD, 2020) heightened by the pandemic. Therefore, this study draws attention to women's home-based entrepreneurship, particularly among the low-income women some of whom are the sole support for their families, are exposed to a higher risk of economic insecurity (Muhammad *et al.*, 2020b). Given the current and future business situation of these women entrepreneurs, the government should help provide financial assistance to these economically insecure entrepreneurs and their families. Similar recommendations have been made for India (Modak *et al.*, 2020).

The COVID-19 pandemic forced governments to impose lockdowns (Triggs and Karas, 2020). In a patriarchal society like Pakistan, where men are the sole earners of their families, many men were unable to work during the pandemic. Further, men did not receive unemployment insurance benefits during this time. While the Government of Pakistan provided some monetary assistance to households, such monetary benefits were insufficient for protecting these families from financial distress (Shafi *et al.*, 2020). In this unique situation, the financial responsibilities of many households were assumed by women informal entrepreneurs (Muhammad *et al.*, 2020a; Muhammad *et al.*, 2020b). This pandemic-induced situation has implications for gender roles in a patriarchal society but also the resilience of families during times of crisis. Therefore, crisis management, particularly economic crisis (Pérvier, 2014), has become a critical issue to be considered by these women entrepreneurs. To do so, they must know the situation before choosing which actions to take or which way to go. Yet, little is known about how the pandemic has been managed by these women entrepreneurs. Therefore, this study examines two research questions:

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- RQ1. Was the COVID-19 pandemic a blessing or a curse for sales increase/decrease of women entrepreneurs in the Khyber Pakhtunkhwa community?
- RQ2. Do socio-economic and demographic factors predict sales for women entrepreneurs in the Khyber Pakhtunkhwa community?

Literature review

In the ongoing pandemic debates, researchers have mainly focused on health rather than entrepreneurial issues (Salamzadeh and Dana, 2020). A few authors have pointed out business opportunities and risks while addressing the macro economic issues (Manolova *et al.*, 2020). Moreover, a limited amount of research has been completed on the way in which women entrepreneurs act in a global crisis, particularly in the developing world. The impact of the COVID-19 pandemic appears to have affected women's businesses more quickly than the economic crunch of 2008–2009 and other global recessions. Furthermore, the impact of the pandemic is estimated to be greater than the previous economic shocks (Salamzadeh and Dana, 2020). Lessons learned from past economic crises suggest that the impact of the current pandemic will vary as a function of the firm's age and size (World Economic Forum, 2020; Werner, 2020) and, therefore, it is hard to predict to what extent it disproportionately affects the income of women's businesses.

The financial crisis of 2008 largely affected the male-dominated sectors of the economy leading to job losses for men (OECD, 2012; Sahin *et al.*, 2010) but in the recovery cycle, the improvement of men's employment was faster than women's (Périer, 2014). Both the developed and developing countries are still facing the crisis. Issues such as threats to their economic performance and highly unstable economic conditions make these institutions more vulnerable (Kuckertz *et al.*, 2020). Women are more exposed to poverty resulting from any crisis-driven loss of income than are men, on average, because women's performance (Watson, 2002), income growth potential (Bliss and Garratt, 2001; Vodá and Florea, 2019) and contribution to the economy was lower than that of men (Schneebaum *et al.*, 2018).

Women's entrepreneurial impact on the society depends on the combination of cultural factors, including values, norms, behaviors, attitudes and other institutional factors that may strengthen their economic activities (Anggadwita *et al.*, 2017). Women's contribution to the economy is affected by socio-cultural and religious contexts (Jabeen *et al.*, 2020; Roomi, 2013). Roomi *et al.* (2018) argued that entrepreneurial career choices of Pakistani women are shaped by the complex interaction of socio-cultural factors used to navigate gender roles and using "religious descriptions" to defend their entrepreneurship. Women informal entrepreneurs have been fulfilling their family responsibilities while, at the same time, regarding entrepreneurship as a vehicle for reducing gender disparity (Ramadani *et al.*, 2017; Anggadwita *et al.*, 2017; Bedford, 2008) and enhancing the economic potential of local community circles, promoting the level of social welfare (Anggadwita *et al.*, 2017).

Women's objectives can be achieved not only through financial resources (Langevang and Gough, 2012), but by programs promoting education, financial literacy, technical training and support from family members (Khan *et al.*, 2020). Family support is recognized as intertwined (Aldrich and Cliff, 2003) with women's businesses because of their mutual impact (Muhammad *et al.*, 2020a; Hsu *et al.*, 2016). Furthermore, such support plays an important role (Leung *et al.*, 2020) that enhances women's business performance and growth (Prasad *et al.*, 2013; Opoku *et al.*, 2019). For example, findings from a Turkish study reported that family moral support has both positive and negative impacts on women entrepreneurs (Welsh *et al.*, 2016). Yet, findings from Pakistan indicate that many women entrepreneurs

report receiving help from their husbands in managing work and family responsibilities (Roomi *et al.*, 2018).

The family's financial position also influences the choices of women entrepreneurs, particularly when their family has a strong financial base to support them (Akehurst *et al.*, 2012; Kim and Gao, 2013). In the discussion of the Self Help Group Bank linkage program in India, (Garikipati, 2010), women's investment in assets is controlled by their husbands or used for household production or consumption which can create problems in repaying the loan. Moreover, the business environment, in developing contexts like Pakistan, is challenging for women informal entrepreneurs because of unstable infrastructure, environmental threats, institutional limitations and lack of government policies supporting women entrepreneurs (Mozumdar *et al.*, 2020). These challenges affect the profitability of women's businesses because there are no alternate sources of livelihood beyond informal entrepreneurship (Chant, 2014).

Institutional context of Pakistan

Islam does not restrict women's engagement in any economic activities as per the Islamic law (Muhammad and Ximei, 2020). Pakistan is the second-most populous Muslim country in the world. According to Yunis *et al.* (2019), Pakistan has a Muslim population of 96.4% with women representing 49.2% of the population. But women's involvement in economic activities is very low as compared to that of men (Muhammad *et al.*, 2020b). As reported by the World Bank (2019), a large share of Pakistan's greatest asset, its population, is being wasted by excluding women from the labor force. Pakistan's unequal development of geographical regions and ethnic origins affects the socio-economic development of the country (Roomi *et al.*, 2018). One consequence is that women have not had equal rights in relation to men because men are considered dominant in the business sector (Roomi, 2013). Gender discrimination is still present in the labor force both socially and culturally (Roomi *et al.*, 2018). The societal beliefs and gender biases not only affect the businesses of women entrepreneurs, but also create barriers to receiving maximum benefits from their work engagements. According to Roomi and Harrison (2010) and Muhammad *et al.* (2020a), women in Pakistan are not always permitted to go out of their homes to participate in mixed-gender programs. There are various reasons for restricting women's mobility (e.g. lack of education, managing work-life balance, personal safety issues and, most importantly, socio-cultural practices) representing an impediment for women entrepreneurs.

According to Yunis *et al.* (2019), of Pakistan's total population, 15.42% are located in the Pakhtunkhwa community. Furthermore, women's entrepreneurial activity ratio is also lowest in the region; 1.2 for women as compared to 21.27 for men. Because of the dominance of the cultural and religious norms, women are considered as housewives and custodians of family honor (Muhammad *et al.*, 2020a). The impelling societal, cultural and conservative norms and practices are widespread across the region. However, legislation follows the Islamic teaching, but the social setting is often induced by cultural and pre-Islamic tribal trends (Pakeeza, 2015). Men are provided with better education and skills while women are relegated to practicing domestic skills to be useful at home. This discrimination leads to the economic and social dependency of women in the circle (Yunis *et al.*, 2019), making women subordinate to men in the society. Furthermore, it also reduces their social status and roles as producers and providers. Women are no longer willing to tolerate social discriminatory practices. By operating their businesses from home, these women entrepreneurs can support their families within their cultural and Islamic context.

The Government of Pakistan encourages self-employment opportunities by providing training in managerial and technical skills especially for women who want to start a

business in keeping with their interests and aspirations, but also contributing significantly toward socio-economic development (Kimbu and Ngoasong, 2016; Ramadani, 2015). To make Pakistan a “welfare state,” the government has started “Ehsaas” cash program in April 2019 to invest in people by uplifting the less developed areas (Government of Pakistan, 2019). Moreover, by promoting several schemes such as financial inclusion, easy access to digital services and enhancing women’s socio-economic empowerment with a special focus on poverty alleviation. This could be an opportunity to offer additional assistance to these women informal entrepreneurs. The socio-economic and political changes can bring about new social structures that can have a positive effect on women’s freedom of movement enhancing their empowerment (Roomi, 2013).

Furthermore, women’s profitable engagements have been proven to empower them financially while contributing more to the national economic growth (Anggadwita *et al.*, 2017). Pakistan has dominant cultural values that differ from the rest of the world. As a result of these socio-cultural and religious limitations, women are essentially forced to run their businesses from their homes. The process of establishing a business at home is not simple as it requires permission and consultation with their husbands and other family members. Most informal businesswomen in Pakistan are engaged in own-account ventures instead of family businesses, based on the need to reconcile the social demands and expectations of the family as gendered constraints (Chant, 2014).

Doing business informally at home alleviates the need to follow others’ legal procedures (Baron and Shane, 2007). Furthermore, it economizes on rents and commuting costs (Kim and Parker, 2020), factors that help women entrepreneurs to compete and to grow their businesses, while providing flexible hours (Gimenez-Nadal *et al.*, 2012; Thébaud, 2015) to meet family responsibilities (Rehman and Roomi, 2012; Roomi and Harrison, 2010; Xheneti *et al.*, 2019). Societal improvements can provide opportunities for women to play more active roles in the economy, particularly in developing countries like Pakistan. Women’s entrepreneurship can be a vehicle for alleviating poverty because women’s earnings contribute to the family’s financial and psychological well-being.

As stated by Marlow *et al.* (2008), women have been considered to be less profitable and lower value-added entrepreneurs than men. Nonetheless, women are entering into the formal and informal business sectors to increase their independence and self-esteem, in effect, increasing their social status relative to that of men (Roomi *et al.*, 2018). However, women who want to start a business need support from their families (Kim and Parker, 2020) to flourish in their economic ventures. Successful women entrepreneurs can change perceptions regarding the role of women in business, increasing their mobility and encouraging interaction with men thereby enhancing their status and attainment (Roomi and Harrison, 2010).

Based on the foregoing literature, it is evident that much more work on women’s informal entrepreneurship is needed, particularly on the challenges and roles of women’s businesses in developing economies. In addition to the socio-economic and cultural constraints facing women, the pandemic has created yet another threat to women-owned businesses. The impact on women entrepreneurs in the informal sector requires particular attention because these businesses are fragile, necessity-driven and face many societal/institutional constraints amplified by the lockdown. The well-being, indeed, economic survival, of women entrepreneurs and their families is at stake because of the economic consequences caused by the pandemic. This study aims to fill the gap as little attention has been given on how the COVID-19 pandemic affects the sales volume of the women’s home-based, informal entrepreneurship in Khyber Pakhtunkhwa community.

Conceptual framework

This study offers a conceptual framework to show how the pandemic has affected the sales volume of women entrepreneurs in the Pakistani informal sector (Figure 1). The pandemic imposed a lockdown to prevent the spread of the virus. The lockdown affects the small business sector which is particularly vulnerable to shocks/recession (Manolova *et al.*, 2020) by reducing customers for products. Women’s engagement in these businesses has differential effects. The socio-economic characteristics of age, homeownership, family support and nature of the business also influence the sales volume/business performance (Brixiová *et al.*, 2020; OECD, 2020). Women informal entrepreneurs contribute to their families while facing economic downturns, while also facing the dual burden of caring for family and household work in addition to their businesses (Chant, 2014), thereby increasing possible work–family conflicts (Greenhaus and Beutell, 1985). We test our conceptual model by focusing on Pakistani women informal entrepreneurs’ whose sales volume was affected by the ongoing COVID-19 pandemic. We also explore socio-economic factors identified in the model.

Method

Participants and sampling procedure

A multi-stage sampling technique was adopted to determine the sample size (Saqib *et al.*, 2016). The sample was selected from the population of women informal entrepreneurs who were engaged in home-based businesses (N = 400) in Khyber Pakhtunkhwa province, Mardan district, Pakistan. To minimize sampling biases and to ensure true representation, respondents were randomly selected from the researcher reconnaissance survey (Zeb and Ihsan, 2020). The reconnaissance survey identified 2,500 women informal entrepreneurs (Rehman and Roomi, 2012). Three business types (i.e. dairy products, cosmetics and cloth) were selected from the reconnaissance survey because of the large number of women that were engaged in these businesses (Hussain and Zaheer, 2020; Yunis *et al.*, 2019). The model indicated that 392 women entrepreneurs would yield a 95% level of confidence with ±5% margin of error [equation (1)] by applying Yamane’s (1967) method.

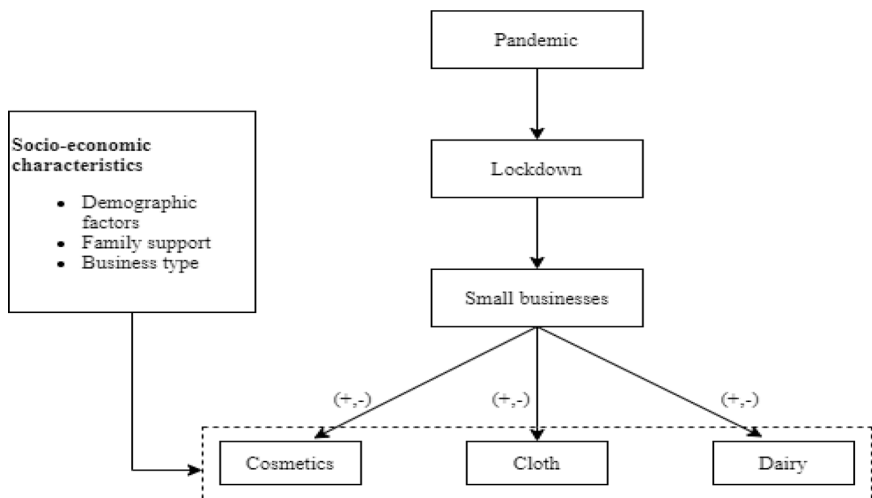


Figure 1. Conceptual framework for women’s informal entrepreneurship in Pakistan

$$n = \frac{N}{1 + N(e)^2} \quad (1)$$

Where,

n = sample size;

N = number of women entrepreneurs; and

e = level of precision, fixed at 0.05%.

Note that the resulting sample was slightly greater ($N = 400$) than the number based on the above model ($N = 392$).

Study setting

A quantitative research approach was used to analyze the data collected from women entrepreneurs to determine the impact of the COVID-19 pandemic on their perceived sales volume. A cross-sectional survey design was used to collect responses from a large number of participants for increased statistical power and reliability of findings. Pakistan's informal economic sector accounts for 76% of non-agricultural employment employing nearly equivalent percentages of women (77.7%) and men (75.7%) working in wholesale and retail trade, manufacturing, community services and transport sector (PBS,2017/2018). The statistics further revealed that 38.7% of the informal entrepreneurial women are employed in the trade followed by the manufacturing sector (Malik *et al.*, 2016). Women's engagements may include a variety of business types including cloth, stitching, dairy, cosmetics, beauty parlors, hand embroidery, meat, etc.

Questionnaire and data collection

A questionnaire comprised of open and closed-ended questions was developed for data collection. The questionnaire was in English and translated into the Pashto dialect, the local language. An English professor translated the questionnaire back into English before conducting the analysis. No difference was found in questionnaire translations. The questionnaire was pre-tested (Dana and Dana, 2005) on 30 respondents who were not part of the current sample. After pre-testing, minor changes in the wording of questions were made. Further, the option for no change in the sales volume was removed because this response was not selected in the pre-test phase. Therefore, the sales volume question had two options: perceived increase vs a decrease in sales volume.

Data were collected from 400 participants using a structured questionnaire from June to August 2020. Seven experienced assistants were hired to interview women entrepreneurs. Face masks were provided to every participant while maintaining social distance during the interview. These female assistants were trained to play their roles in a systematic and standardized manner to eliminate potential biases. Furthermore, these research assistants were highly supervised by the researcher during data collection (Goldstein *et al.*, 2018; Buor, 2004).

Data analysis

Data were entered and analyzed using the IBM SPSS (version 27). Table 1 shows the coded description, frequencies and percentages of the study variables. Both bivariate and multivariate statistics were applied to analyze the data. Chi-square was also applied to test association and group differences among participants (i.e. participants whose sales volume was decreased/increased), as shown in Table 2. Subsequently, variables were tested together using a logistic regression model.

Variables	Coding and description	Mean	SD	n	(%)
<i>Dependent variable</i>					
Sales volume	0 = Decrease	–	–	131	32.8
	1 = Increase	–	–	269	67.2
<i>Independent variables</i>					
Age	Respondents' age in years	36.47	7.32	–	–
Schooling	Schooling in years	04.03	4.50	–	–
Marital status	0 = Single	–	–	85	21.2
	1 = Married	–	–	315	78.8
Homeownership	0 = No	–	–	99	24.8
	1 = Yes	–	–	301	75.2
Location	0 = Urban	–	–	137	34.3
	1 = Rural	–	–	263	65.7
Household size	Total members in the family	09.50	4.07	–	–
Family financial position	1 = Lower than average	–	–	144	36.0
	2 = Average	–	–	166	41.5
	3 = Better than average	–	–	90	22.5
Family support	0 = No	–	–	30	7.5
	1 = Yes	–	–	370	92.5
Business experience	Business experience in years	9.46	4.95	–	–
Type of business	1 = Cloth	–	–	154	38.5
	2 = Cosmetics	–	–	96	24.0
	3 = Dairy products	–	–	150	37.5

Table 1.
Descriptive statistics
study variables
(N = 400)

Note: SD = standard deviation
Source: Authors own calculations

Logistic regression was used to examine the effects of socio-economic dynamics and family support on the perceived sales volume of respondents. The logistic regression model can better evaluate the dependence of the dichotomous variable by the predictors (Stock and Watson, 2015). The model evaluates the relationship between the dichotomous dependent variable and one or more binary, rank or continuous independent variables by estimating probabilities and using the logit function. The assumptions of logistic regression were examined. No evidence of multicollinearity was found. Equation (2) shows that model that was tested:

$$Y_i = \log \left[\frac{p}{1-p} \right] = \log Y = \beta_0 + \beta_i X_i + \mu. \quad (2)$$

Where,

- Y_i = 1 for increase in sales volume,
0 = otherwise;
- β_0 = constant;
- β_i = coefficient of the i th predictor;
- X_i = predictor variables where $i = 1-8$; and
- μ = error term.

The logistic regression model tested the relationship between the binary dependent variable (i.e. perceived increase/decrease in sales volume during COVID-19) and our set of independent variables. The advantage of using the model is the ability to predict the probability associated with levels of the dependent variable by calculating the odds ratios using the coefficients from the model.

Variables	Sales volume χ^2	Decrease		Increase	
		$n = 131$	(%)	$n = 269$	(%)
<i>Age (year)</i>	22.00				
23–32		62	(44.9)	76	(55.1)
33–40		49	(33.6)	97	(66.4)
41–51		20	(17.2)	96	(82.8)
<i>Schooling</i>	4.30				
No formal schooling		63	(35.2)	116	(64.8)
≤ to 5 years		30	(31.2)	66	(68.8)
≤ to 10 years		20	(24.7)	61	(75.3)
> than 10 years		18	(40.9)	26	(59.1)
<i>Marital status</i>	4.52				
Single		36	(42.4)	49	(57.6)
Married		95	(30.2)	220	(69.8)
<i>Home ownership</i>	16.75				
No		49	(49.5)	50	(50.5)
Yes		82	(27.2)	219	(72.8)
<i>Location</i>	11.12				
Urban		30	(21.9)	107	(78.1)
Rural		101	(38.4)	162	(61.6)
<i>Household size</i>	9.76				
4–7		66	(41.3)	94	(58.8)
8–11		41	(29.7)	97	(70.3)
12–21		24	(23.5)	78	(76.5)
<i>Family financial position</i>	3.01				
Lower than average		48	(33.3)	96	(66.7)
Average		60	(36.1)	106	(63.9)
Better than average		23	(25.6)	67	(74.4)
<i>Family support</i>	8.42				
No		17	(56.7)	13	(43.3)
Yes		114	(30.8)	256	(69.2)
<i>Business experience</i>	8.66				
1–6		49	(41.9)	68	(58.1)
7–10		49	(33.1)	99	(66.9)
11–26		33	(24.4)	102	(76.6)
<i>Type of business</i>	69.87				
Cloth		17	(11.0)	137	(89.0)
Cosmetics		30	(31.3)	66	(68.8)
Dairy products		84	(56.0)	66	(44.0)

Table 2.
Comparison of
participants based on
perceived decrease/
increase in sales
volume

Notes: * $p < 0.05$; ** $p < 0.01$. N = 400
Source: Field survey (2020)

Results

Descriptive analysis

Results showed that perceived sales volume increased for 67.2% of the women entrepreneurs. The respondents mean age was reported 36 years with a standard deviation

of 7.32. Education was measured in schooling years, and the mean of schooling was 4.03 with reported standard deviation of 4.50. Most of the women entrepreneurs were mostly married (78.8%), owned their own homes (75.2%), 65.7% belong to rural areas, maintained an average family financial position (41.55%) and received support from their families (92.5%). The respondent's household size and business experience are almost the same with a mean of 9.50 and 9.46 with a standard deviation of 4.07 and 4.95, respectively. Considering types of women's businesses, 38.5% had a cloth business, 37.5% were in dairy products business and 24% were in cosmetics business.

Bivariate association

As shown in Table 2, all the variables were significantly associated with sales volume except schooling and family financial position. Of the women aged 41–51 years, 82.8% reported an increase in sales volume during the COVID-19 pandemic. Moreover, the results revealed that 69.8% of married women reported an increase in sales volume. Of the women entrepreneurs reporting an increase in their sales volume, 72.8% own house and 78.1% lived in the urban areas. The findings showed that the household size of 12–21 was reported by 76.5% while 69.2% of the entrepreneurs who had the support of their families reported an increase in sales. Business experience also played a role: women with 11–26 years of experience reported higher sales during the pandemic. Considering type of business activities, women engaged in the cloth businesses reported higher sales than those selling cosmetics or dairy products (*RQ1*). Among the variables, four (i.e. age, education, household size and years of business experience) were continuous variables and transformed into categorical variables to assess the bivariate association (Hwang, 2008).

Logistic regression model

Logistic regression was used to analyze the impact of several associated factors on the probability of women entrepreneurs reporting perceived changes in sales volume. The model consists of eight independent variables: age, marital status, homeownership, location, household size, family support, business experience and business type. The full model shows all independent variables were statically significant, χ^2 ($N = 400$, $df = 9$) = 136.34, $p < 0.001$, indicating the ability of the model to report respondent's responses. The model correctly classified 79.5% of the cases and the overall fit of the model reported 29.9% (Cox and Snell R^2) and 40.2% (Nagelkerke R^2). The predictors should not be highly correlated as this causes a multicollinearity problem that can affect the parameters of the logistic regression model. Variance inflation factor (VIF) values greater than 10 are a source of concern (Myers, 1990), while some studies considered ideal close to 3 or less (Hair *et al.*, 2019). The VIF values were less than 3 as reported in Table 3, indicating no issue of multicollinearity.

As presented in Table 3, five independent variables made a statistically significant contribution to the model: age, homeownership, household size, family support and business type (*RQ2*). The strongest predictor was family support with an odds ratio of 3.72. This implies that women entrepreneurs who had family support were 3.72 times more likely to report an increase in sales than those who did not, controlling other factors in the model. Homeownership was the second strongest predictor of sales volume. The respondents who had their own homes were 2.05 times more likely to report an increase in sales as compared to those that did not own a home. Further, as age and household size increased, respondents were more likely to report a 1.11 and 1.12 times increase in sales, respectively. The odds ratios for cosmetics and dairy product engagements were less than 1, indicating 0.27 and 0.07 times less likely to report an increase in sales as compared to the cloth business. In

Variables	Coefficient	Standard error	p-value	OR (95%CI)	VIF
Age	0.106	0.027	0.000	1.11 (1.05–1.17)	2.18
Marital status:					1.42
Single®	1.000				
Married	−0.092	0.354	0.795	0.91 (0.46–1.83)	
Homeownership:					1.05
No®	1.000				
Yes	0.720	0.292	0.014	2.05 (1.16–3.64)	
Location:					1.16
Urban®	1.000				
Rural	−0.262	0.308	0.395	0.77 (0.42–1.41)	
Household size	0.117	0.035	0.001	1.12 (1.05–1.20)	1.01
Family support:					1.03
No®	1.000				
Yes	1.313	0.467	0.005	3.72 (1.49–9.29)	
Business experience	−0.026	0.037	0.490	0.97 (0.91–1.05)	1.75
Business type:					1.18
Cloth®	1.000				
Cosmetics	−1.297	0.370	0.000	0.27 (0.12–0.56)	
Dairy products	−2.591	0.353	0.000	0.07 (0.04–0.15)	
Constant	−3.894	0.937	0.000		
−2 log likelihood		369.574			
Cox and Snell R^2		0.289			
Nagelkerke R^2		0.402			
Hosmer and Lemeshow test χ^2 (p-value)		9.202 (0.326)			

Table 3.
Logistic regression
analysis predicting
decreased/increased
in sales volume

Notes: CI = confidence interval; ® = reference category; OR = odds ratio; VIF = variance inflation factor.
* $p < 0.05$ and ** $p < 0.01$

summary, we conclude that COVID-19 positively affected the sales volume of the cloth and cosmetics businesses, but negatively affected dairy product sales.

Discussion

The effects of the COVID-19 pandemic differ among different businesses and sectors. The pandemic has affected every sector from startups to well-established businesses. A study by [Salamzadeh and Dana \(2020\)](#) conducted in Iran showed that the number of failed startups has increased due to the uncertain economic conditions during the pandemic. As stated by [Jafari-Sadeghi \(2020\)](#) during particular financial crises, the types of entrepreneurial engagements be given importance and well established businesses are less influenced by the crisis. In this study, we have focused on small, informal business sector. The findings showed that women's informal businesses can absorb the shocks of the pandemic's disruptions, but the effects were not uniform for the business types studied. Whether the pandemic was a blessing, or a curse (*RQ1*), requires additional explanation.

Consider the case of businesses selling cloth. Most of the large cloth markets are located in urban areas that were closed during the lockdown. As a result, people were buying cloth from informal women entrepreneurs. Further, Eid al-Fitr ("Festival of Breaking the Fast"), a religious festival that occurred during the pandemic, meant that people bought their new clothes from informal women entrepreneurs. This helps to explain that having a business selling cloth was a blessing because of increased demand during the lockdown. These

results were not consistent with the findings of study conducted by [Salamzadeh and Dana \(2020\)](#) in Iran that reported decrease in sales during the pandemic. However, the present findings show that women entrepreneurs were sufficiently agile to meet the new market demands.

The situation for dairy products was quite different. Most of the dairy products are offered by hotels in the market. The COVID-19 pandemic compelled the government to close these hotels and restaurants which reduced the supply of dairy products available in the market, thereby decreasing sales volume for women in this type of business. These results support the findings of the study conducted in India, where sales of dairy products had also declined during pandemic ([Modak et al., 2020](#)).

Thus, *RQ1* results revealed that the pandemic was a blessing for sales of women entrepreneurs with cloth businesses but a curse for those with businesses selling dairy products. And, although women entrepreneurs in dairy businesses were more likely to have a decrease in sales, we note that all businesses represented in this study survived the disruptions of the pandemic, at least to this point.

The findings for *RQ2* revealed that women's socio-economic factors did predict sales. Family support was the most important predictor of a perceived increase in sales volume. As stated by [Maritz et al. \(2020\)](#), these women entrepreneurs have changed this global challenge into an opportunity for their survival and growth. This is not surprising given the important role of family support in the entrepreneurship literature ([Leung et al., 2020](#); [Beutell and O'Hare, 2020](#)). Our results indicate that family support is even more important during critical times like the pandemic. Support of spouse/partner and family can have instrumental, financial and emotional consequences. Because businesswomen are constrained by the socio-religious and cultural context, being restricted to their homes and unable to freely attend the mixed-gender programs ([Muhammad et al., 2020b](#)), spousal assistance can be essential for maintaining women's businesses. Spouses can provide financial resources, material input and better access to local and regional markets that will add value to women entrepreneurs' business success ([Leung et al., 2020](#); [Razzak and Jassem, 2019](#)). Spouses have the freedom to pursue social interactions to build a strong network for retaining customers and generating goodwill in the locality ([Zeb and Kakakhel, 2018](#)). The findings are supported by [Leonelli et al. \(2019\)](#) who stressed the designing of creative marketing, including new distribution marketing channels, can add some value to women's businesses.

Homeownership (*RQ2*) was also one of the important predictors of an increase in the sales volume. It can be a proxy for the economic status of these households implying that women who had their own houses were economically stable. Our findings are supported by [Kim and Parker \(2020\)](#) who found that home-based businesses can help to economize on rents and other costs making such businesses more resilient to economic shocks such as the pandemic. In addition to home ownership, household size (*RQ2*) played a key role in a sales volume increase with larger households more likely to report a sales increase. Our results for household size are in agreement with [Perrons \(2003\)](#) who found that household size contributed significantly to the success of home-based businesses that can also help balancing work and family responsibilities.

The findings of the study showed that age (*RQ2*) was positively related to sales volume of these women entrepreneurs. Age and experience are relevant because younger businesswomen might be at a disadvantage in borrowing financial capital ([Brixiová et al., 2020](#)). Older women have greater access to financial capital and markets than younger women entrepreneurs. Older women are also more resilient ([Batool, 2021](#)). Moreover, the older women have more fully developed social networks that enhance relationships with

customers. Our results are consistent with those of [Evans and Jovanovic \(1989\)](#) who reported that age was positively associated with access to financial capital.

Our findings are in agreement with [Muhammad *et al.* \(2020b\)](#) that goodwill can increase the demand for informal business products. Moreover, this social network can help them to offer and advertise their products in the locality. Further, family support (*RQ2*) has been identified as a factor in managing work–life balance ([Gopalan *et al.*, 2020](#); [Rahman *et al.*, 2020](#); [Marques *et al.*, 2020](#)) and also providing material inputs ([Leung *et al.*, 2020](#)). However, [Mozumdar *et al.* \(2020\)](#) indicated that women’s business performance was negatively affected by the social relationships although this may not apply to immediate family. In fact, the presence of male partners at home during the lockdown might help with business and parental demands during the pandemic. Based on cultural norms, most of the families live together, and women’s home businesses can provide an opportunity for partnership at homes in the future ([Tahir *et al.*, 2018](#)).

Although women in this study engaged in informal entrepreneurial activities, their income potential is less than women who work outside the home. However, their independent income generation is undoubtedly indispensable as a capacity-building approach to female empowerment and poverty reduction ([Chant, 2014](#)) but also a viable option for women entrepreneurs who do not need to earn a high income ([Loscocco and Smith-Hunter, 2004](#)).

Implications of study

There are a number of implications of our research on informal women entrepreneurs’ sales during the pandemic. We have divided these into practical and theoretical implications as follows.

Practical implications

Sales of women entrepreneurs were clearly influenced by the pandemic although the type of business and socio-demographic factors clearly played a role. Women entrepreneurs in the present study made necessary adjustments to their businesses in response to the pandemic and many women increased their sales. Other research on women entrepreneurs suggests much more negative consequences of COVID-19. For example, [Manolova *et al.* \(2020\)](#) found that the pandemic affected women entrepreneurs because their businesses tend to be newer and smaller, while also being in more vulnerable economic sectors. Nearly two-thirds of the women reported drops in revenues ([Manolova *et al.*, 2020](#)) contrasting with the present findings, but consistent with those reported by [Salamzadeh and Dana \(2020\)](#). Further, women entrepreneurs reported business pivots to help sustain their businesses ([Manolova *et al.*, 2020](#)), offering some similarities with women entrepreneurs in the Khyber Pakhtunkhwa community.

Family support during the pandemic was critical for the success of women entrepreneurs in this sample. And, although family support of women entrepreneurs is emphasized in the literature ([Heilbrunn *et al.*, 2014](#); [Heilbrunn and Davidovitch, 2011](#); [Wijewardena *et al.*, 2020](#)), other research shows no relationship between family organizational support and company performance ([Batool, 2021](#)) among Pakistani women entrepreneurs. However, the [Batool \(2021\)](#) sample was comprised of small and mid-sized businesses that were quite different from the informal, home-based women entrepreneurs studied here. Family support and family organizational support are likely related but represent distinct variables. Although lack of family support has been noted as an obstacle for women entrepreneurs ([Batool, 2021](#)), the present study supports the essential role of family support in sustaining sales during the

pandemic. Further, the economic impact of women entrepreneurs and their families needs additional recognition.

Theoretical implications

There are several theoretical implications to be derived from this study. The first is the robustness of the joint, extended family system, supporting women's entrepreneurship. The second is socio-cultural and religious context used to navigate gender roles among women entrepreneurs. The third, and final, is the "multiplier effect" of women's entrepreneurship, particularly in a developing context.

The enormous significance of the family system, often given short shrift in entrepreneurship research (Zachary, 2011), must be recognized and acknowledged. Family in this context is the bedrock supporting women's entrepreneurship. This support is mutually reinforcing – women are supported but also provide support to their families. In fact, for many families during the pandemic, women's businesses were the only support, including financial support, for family. This reinforces the theoretical and empirical findings that family businesses are very resilient and resourceful in the face of external shocks than non-family businesses (Abdelzaher *et al.*, 2018). This relationship has now been tested and confirmed even with the "triple threat" (supply, demand and financial shocks) of COVID-19 (Triggs and Karas, 2020).

The findings also extend sustainable family business theory (SFBT; Danes, 2013; Danes *et al.*, 2009; Danes *et al.*, 2008; Zachary, 2011) to the joint, extended family systems of South Asia. SFBT is "a dynamic, behaviorally based, multidimensional family theory of the firm that accommodates both business and family detail and complexities" (Zachary, 2011). The tightly coupled integration of women's informal entrepreneurship and family in a developing context like Pakistan reveals dynamics that transcend Western, narrower views of the "nuclear" family. The joint family system is critical in sustaining women's entrepreneurship because the extended family enhances Pakistani women's entrepreneurial growth (Roomi *et al.*, 2018). Extending SFBT to include other realizations of "family" including robustness, resilience and agility of extended families requires additional theoretical elaboration.

The constraints on women's behavior in a patriarchal context must be examined and contextualized. Roomi *et al.* (2018) argued that the emergence of women entrepreneurs in Pakistan resulted from socio-cultural dimensions of gender roles supported by "religious descriptions" used to justify women's pursuit of entrepreneurship. Women informal entrepreneurs have been fulfilling their family responsibilities while, at the same time, advancing entrepreneurship to reduce gender disparity (Bedford, 2008). This reveals how structurally disadvantaged women, in the context of developing economies, "reject victimhood and seek emancipation from their disadvantage" (Baker and Welter, 2017, p. 174) by taking control of their lives. As such, women's entrepreneurship transcends business *per se*, representing a path to gender equality and recognition for their contributions. Our findings differ from those of Roomi (2013) because women entrepreneurs in the present study were dealing with the impact of the pandemic, a situation that seems to have further empowered women entrepreneurs.

Finally, one of the theoretical constructs so critical to women's entrepreneurship in the developing world is the "multiplier effect" advanced by Lepeley (2020). The multiplier effect demonstrates the depth of women's contributions to economic growth, to families, to households and to societies enacted in an integrated and seamless fashion. The multiplier effect also refers to satisfaction and work–life integration that has an impact not only on

women's well-being (Lepeley *et al.*, 2020), but that of their families, households, children and communities. The fact that women entrepreneurs in this study were able to manage their businesses and families during the "home-shift" burden related to the pandemic (Jaim, 2020), including health issues and home-schooling of children, is consistent with the multiplier effect. Little empirical work has been completed on the multiplier effect so our study may be unique in this regard.

Study limitations and future research

The present study is limited to women's home-based entrepreneurship operated in the informal sector. The change in perceived sales volume was presumed to be associated with the COVID-19 pandemic. Note that the sales volume variable (decrease/increase) was based on the perceptions of the women entrepreneurs as these businesses did not have formal books of accounts. The current study focused on only three business types (cloth, cosmetics and dairy products) operating in the informal market. Future studies might investigate other sectors to see if the present results hold. Women's home businesses are a constantly growing and this represents an understudied phenomenon. Further, studies should be conducted to explore the regional impact of women's home businesses with respect to socio-economic development.

Conclusion

The COVID-19 pandemic has had multidimensional effects on informal women entrepreneurs in Khyber Pakhtunkhwa community, Pakistan. The results revealed that the pandemic was a blessing for cloth and cosmetics businesses, but a curse for women selling dairy products. Although these businesses are small, their contribution to family finances and well-being is significant. Income generated by women-run businesses helped to challenge the tradition of male dominance (i.e. many men were unemployed during the pandemic) thus helping to decrease gender inequality (Al-Dajani and Marlow, 2010) at least during this health crisis. During lockdowns caused by the pandemic, informal women entrepreneurs can serve the local community by providing products and services in a socially responsible manner while generating income for their livelihoods. People can buy from these women entrepreneurs with minimal risk of infection rather than shopping in the big markets where the risk of infection is dramatically increased. By getting financial and moral support from the government, their families and the community, these women home-based entrepreneurs contribute to the mainstream national economy and contribute their share to the region, thereby enhancing the overall development of the society. Thus, women entrepreneurs will help boost economic growth, increase productivity and provide new job opportunities in the short and long run, making women's businesses more competitive and sustainable beyond the ongoing COVID-19 pandemic.

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