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# Entrepreneurial Income and Wellbeing: Women's Informal Entrepreneurship in a Developing Context

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**Abstract:** This study examines the impact of women's entrepreneurial income on wellbeing. Women entrepreneurs (N = 504) from district Mardan, Khyber Pakhtunkhwa, Pakistan participated in the study. ANOVAs and multiple regressions were used to analyze the impact of predictors on the dependent variables (i.e., per capita income, education, health, entertainment, social, household, and other miscellaneous expenditures, investment, savings, and charity). The findings indicated that women's informal entrepreneurship has a significant role in family, economic, and societal wellbeing. The results contribute to the understanding of women's entrepreneurial income on individual and family wellbeing. Women's informal entrepreneurship plays an important role, particularly in the developing world, consistent with the multiplier effect of women entrepreneurs" wellbeing. Measures were suggested to empower such women informal, home-based entrepreneurs in view of the United Nations' Sustainable Development Goals.

Keywords: entrepreneurship; women; informal business; income; wellbeing; family



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# 1. Introduction

Women are thought to be poorer than men [1] not only in the developing world; most of the richest people in all countries are men. As reported by Forbes [2] the net worth difference between the world's richest men and women is USD 103.4 billion. Women's wellbeing is lower because of a lack of employment opportunities and other socioeconomic factors. To offset this disparity, women engage in informal businesses. Women's involvement in economic activities is one of the fastest growing business populations in the world [3]. Women's entrepreneurship contributes to socioeconomic transformation and is regarded as a universal solution for many problems particularly for low income and less developed regions. Statistics showed that informal commercial activities are estimated to be 30% of all economic activities around the globe [4]. However, Pakistan's informal economic sector accounts for 76% of non-agricultural employment [5].

Women's home-based entrepreneurship is growing because of an enhanced understanding of the economic situation required to manage the work–family interactions necessary for earning a livelihood while educating their children [6,7]. In a patriarchal society such as Pakistan, women make economic contributions through informal entrepreneurship and informal entrepreneurship enhances the status of women and their family's wellbeing. Women's entrepreneurship is a method for converting available resources into goods and services while also creating employment opportunities [8,9] and other benefits that will ultimately lead to wealth creation [10] and social empowerment. Informal entrepreneurship is a type of employment where women not only engage in business activities but also provide opportunities and inspiration for other women in their circle. Women's entrepreneurship

Sustainability **2021**, 13, 10262 2 of 21

will help in reducing gender inequality [11], marginality, and the subordination of women's work as financial independence and wellbeing increase.

Women's entrepreneurship is often cited as a priority by international agencies, national governments, non-governmental organizations, and other policymakers [12]. The wellbeing of women in entrepreneurship has become a recognized area in the field of entrepreneurship and women's participation in entrepreneurship has increased dramatically [13]. For the socioeconomic transformation process, women's informal entrepreneurship, through their productive and reproductive roles [14], has been regarded as one of the most important drivers of economic growth [15] and sustainability.

This study considers women's informal entrepreneurship, a type of business engagement that occurs outside the regulatory system (i.e., businesses are not registered, and most do not pay business taxes) that is unmonitored despite its significant contribution to alleviating poverty and enhancing general wellbeing. Globally, 30% of women are self-employed in this informal sector. Many such businesses are small and home-based. This business arrangement provides the opportunity to earn an income while also meeting housework and childcare demands [16]. However, social norms, such as restricting women's activity to the home, limit women's employment, all but forcing women to work from home to support their families and contributing to their economic wellbeing.

This study highlights the importance of women's entrepreneurial engagements in a developing context such as Pakistan. The data have been collected from women informal entrepreneurs in one district from Pakistan. These entrepreneurs were engaged in a different types of businesses. As the role of women's entrepreneurial income contributions increases, women's roles in the family, education, health, and meeting household expenditures cannot be ignored. Therefore, all these indicators are included in this study. The findings suggest that these businesses play a key role in all wellbeing indicators under study. Furthermore, because of women's contributions to family wellbeing, women also serve as role models by inspiring other women to engage in entrepreneurship.

We contribute to the gender and entrepreneurship literature by addressing women's engagement in economic activities that have been underexplored. We investigate the role of women's informal entrepreneurial income as a factor in family, economic/financial, and societal wellbeing. To the best of our knowledge, this is the first attempt to look at the actual allocation of entrepreneurial income reported by women entrepreneurs in a developing context.

## 1.1. Theoretical Context

This study draws on Sustainable Family Business Theory-SFBT [17–20] and the multiplier effect of women's entrepreneurship [21] to examine women's entrepreneurial income in relation to wellbeing. SFBT is "a dynamic, behaviorally based, multidimensional family theory of the firm that accommodates both business and family detail and complexities" [20] that nicely underpins women's informal entrepreneurship in a developing context. Family members bring social capital, human capital, and assets to women's entrepreneurial businesses. This also includes emotional support, financial support, direct services, and intangible support of being present if help is needed. Each of these support factors can enhance the wellbeing of women entrepreneurs and families.

The "multiplier" effect [21] is a recognition of the range and depth of women entrepreneurs' contributions to their businesses and families performed in a seamless, integrated fashion. The multiplier effect includes women's satisfaction and work-life integration that have an impact not only on women's wellbeing [21] but that on their families, households, children, and communities. These include psychological, spiritual, and physical wellbeing that, in a developing context, emanate from economic wellbeing. This is a critical point, the rationale for examining women's entrepreneurial income as an indicator of wellbeing. The literature shows that women's involvement in economic activities has a positive impact on household wellbeing [22]. The multiplier effect is one of the main

Sustainability **2021**, 13, 10262 3 of 21

reasons why women's entrepreneurship contributes so significantly to economic growth and wellbeing.

# 1.2. Institutional Context of Pakistan

Pakistan ranks second in the Muslim world, with a Muslim population of 96.4%, in which women represent nearly half of the country's population [23]. However, women do not enjoy status equality. Women's business and economic engagements are low compared to men, which limits their contributions to wellbeing [24]. This means that Pakistan's large share of its greatest asset, its population, is being wasted by limiting women's participation in the labor force [25]. The low entrepreneurial activities ratio may be the result of the dominance of the sociocultural norms that restrict women to the roles of housewives and custodians of family honor [26]. Because the status of women in Pakistan is defined by their traditions, living patterns, household incomes, cultures, castes, and other aspects [23], maintaining cultural norms requires that women normally wear a veil (purdah) and are not permitted to participate in the mixed-gender environments. As such, women face many impediments because of these practices.

The UNDP identifies "gender inequality" as a key hurdle to human development thereby declaring gender equality as a sustainable development goal (SDG) [11]. Pakistan stands at 152 out of the total 189 countries on the Human Development Index in 2018. Gender inequality needs to be addressed in a manner that increases and uses women's potential and furthers their financial independence [27]. This will help women to use their entrepreneurial income in ways that promote their wellbeing and that of their families. Reducing gender inequality will further lessen the unequal development in the geographical regions and ethnic origins that affect the socioeconomic improvement of the country [28].

The Pakistani people prefer to live in joint family systems where they can feel secure. It is a common cultural practice to take care of family members because these members are dependent on each other. In particular, women are financially dependent on their families for authority in using financial resources [29] allocated primary to health care, children's education, social activities, entertainment, food, and other personal expenditures. Further, the household division of labor gives men the authoritative role while women are confined at home to doing housework [29] and caring for the family.

# 2. Literature Review

# 2.1. Concepts of Wellbeing

The concept of wellbeing has received considerable attention in recent decades because of its key role in creating and maintaining healthy and productive societies [30,31]. It has been widely accepted that wellbeing is a general term and a multidimensional phenomenon [32] and reported in the literature as subjective and objective wellbeing. Different connotations have been used for the term "wellbeing" in different contexts and disciplines [30]. The enhancement of wellbeing should be seen by taking into account its indicators that go beyond the standard of living to include additional dimensions of wellbeing, such as education, health, political voice and governance, environmental factors, among other dimensions [33,34]. Traditionally, objective wellbeing is captured through surveys, such as consumption surveys and household income [35]. Different methodologies have been used to measure collective and individual objective wellbeing [36] but it is hard to measure wellbeing because there are multiple dimensions: health, job opportunities, socioeconomic development, environment, safety, and politics have been used by different institutions in the literature [37]. For example, economists use the term wellbeing to measure economic capacity and prosperity [38]. However, Easterlin, R. A. [39] criticized this approach because economic growth does not necessarily increase wellbeing.

Gross Domestic Product has been used traditionally as a good indicator of societal wellbeing [40] but this concept has also been criticized as a misleading tool for informing public policies [41]. For instance, the most commonly known composite index measuring multidimensional wellbeing is the United Nations' Development Programme (UNDP)'s

Sustainability **2021**, 13, 10262 4 of 21

Human Development Index (HDI), which ranks countries' average achievement in income, education, and health dimensions [42]. In the light of the above discussion, it is evident that women's entrepreneurial wellbeing cannot be measured using traditional entrepreneurship standards, as women have different parameters by which to measure their economic wellbeing [13].

Despite the different dimensions of wellbeing used by various researchers, we have classified women's entrepreneurial income contributions into three main categories: family, economic/financial, and societal wellbeing. The family wellbeing indicators include education, health, entertainment, household consumption, and other miscellaneous expenditures. Investment and savings have been grouped into economic/financial wellbeing following [43], because entrepreneurs desire a sense of expected future financial security. Finally, the income spent on social activities and given to a charity for the poor falls under the category of societal wellbeing.

# 2.2. Women Entrepreneurial Income Role in Family, Economic and Societal Wellbeing

Women's engagements are considered a socialised economic process that vary with diversified contexts [44] such as cultural and socioreligious variables. Aligned with new developments in the region, women are now starting and owning businesses that contribute to household wellbeing through economic engagements and wealth creation [45]. Across the field, the findings indicate a correlation between income, wealth, and wellbeing, but the variation in economic resources is not well explained [46]. The household expenditures were more connected to income, as stated by Khalili et al. [47].

Furthermore, income enhances wellbeing only insofar as it helps people meet their basic needs and by avoiding poverty. These businesses can help to employ other family members as advanced by the findings of Blanchflower et al. [48] that employed individuals report higher contributions in wellbeing than unemployed individuals. To enhance wellbeing, governments in emerging and less developed economies have embraced women's entrepreneurship as a strategic tool for economic and societal wellbeing [49]. From the above discussion, the assumption that women's informal entrepreneurial income plays a role in family, economic, and societal wellbeing can be inferred. As different entrepreneurial activities generate different revenues for entrepreneurs, income contributions will likely vary across the products that are offered by women entrepreneurs.

# 2.3. Women Entrepreneurs' Socioeconomic and Demographic Factors and Wellbeing

It is evident from the literature discussed above that women's informal businesses play a role in wellbeing. However, in this debate, the role played by socioeconomic factors is a very important consideration. Clearly, socioeconomic factors such as social class, education, and home ownership play an important role in the family and economic wellbeing. As reported by Khalili et al. [47] married women spend more on their children's educational wellbeing. Additionally, as social class increases, women's educational expenditures for children increase [50]. However, allocating entrepreneurial income to family expenditures reduces savings and investments. Further, the location of women's businesses (rural vs. urban) also affects investments and savings [51]. Homeownership economizes on rent and the other commuting costs as a consequence of running the business from the home [52]. Additionally, because of the joint family system, family members are dependent on each other [29] for support and economic wellbeing.

Per capita education, health, and household expenditures vary between and within the different regions of the world. The literature reported that educational expenditures were inelastic to household members [47]. The adverse relationship between family size and household expenditure was reported by Fleischer and Rivlin [53] since larger families spend less on educational and recreational expenditures [54] on a per capita basis. Further, financially secure families have the resources to support their families, enhance their family wellbeing, while simultaneously providing financial resources for their businesses [55].

Sustainability **2021**, 13, 10262 5 of 21

Furthermore, households facing financial problems in paying their families health expenditures which influence their economic performance. On the other hand, major expenditures on medical bills as a proportion of income can result in poverty [56]. A notable portion of the Pakistani population (16.34%) is below 5 years of age, but in terms of spending on health and education, Pakistan is ranked in the bottom 5% of all countries. Nevertheless, the wellbeing of nations is linked with good health that can be impeded by social and financial worries. Families' health can be affected by factors such as income, access to healthcare, employment opportunities, and the impact of economic and social developments [57]. Here, we have focused primarily on socioeconomic indicators of wellbeing. Wealth generation and investment have been considered a revenue source that makes women and their families' wellbeing less vulnerable to shocks in difficult economic times [37]. Therefore, it is assumed that different socioeconomic and demographic characteristics contribute to the family, economic, and societal wellbeing.

# 2.4. Women Business Products Offered and Wellbeing

Women's business engagements may take different forms because they offer different products and services to society. Yet, the overriding goal of these different economic engagements is supporting their families. In developing countries such as Pakistan, homebased businesses, such as beautician and cloth businesses, represent the emerging business trends [3]. Furthermore, women's home-based businesses offer the chance to save by creating wealth and investment opportunities [45] contributing to their economic wellbeing. Furthermore, to attain business sustainability, women entrepreneurs need to save and invest to generate sufficient income for the future. The role of women's businesses goes beyond their personal wellbeing to affect their families and communities. However, these small ventures have a positive effect on the household in general, and specifically on their family and societal wellbeing [13]. It is assumed that income generated by women's businesses plays a role in the family, economic, and societal wellbeing.

#### 3. Method

# 3.1. Participants Selection and Sampling Procedures

The participants (N = 504) were selected from the population of women informal entrepreneurs engaged in home-based economic activities in district Mardan, Khyber Pakhtunkhwa, Pakistan. To minimize the biases, participants were randomly selected from the researcher reconnaissance survey to ensure a representative sample [24]. A total of 2000 women informal entrepreneurs were identified who were engaged in home-based businesses. Eight business sectors, including dairy, grocery, stitching, hand embroidery, beautician, cosmetics, meat, and cloth, were selected because of the large number of women in these businesses.

A multistage sampling technique was used to calculate the sample size [58]. In the first stage, Khyber Pakhtunkhwa was selected due to the strong cultural influence on women. Furthermore, this province has been theoretically divided into three regions. The central region has 45%, the southern region has 20% and the northern region has 35% of the Khyber Pakhtunkhwa province's population [59]. In the second stage, a central region was selected, assuming that all regions have similar socioeconomic conditions, with women actively involved in informal economic activities. In the third stage, district Mardan was purposively selected because it is the second largest populated and central district of the province. In the fourth stage, before data collection, we contacted the district administration and conducted a reconnaissance survey to identify women engaged in informal entrepreneurship. By applying Yamane, T. [60] the model (Equation (1)) determined 392 women informal entrepreneurs at a 95% confidence level and  $\pm 5\%$  margin of error.

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

Sustainability **2021**, 13, 10262 6 of 21

N = Number of women entrepreneurs.

e =Precision level, fixed at 0.05%.

Note that the resulting sample size was greater (N = 504) than the number based on the above model (N = 392).

#### 3.2. Questionnaire and Data Collection (Personal Statistics of the Women Entrepreneurs)

To collect primary responses from participants, a questionnaire comprised of open and closed-ended questions was developed. The questionnaire included information on participants' demographic, income, and expenditure patterns as well as their general overview about their socioeconomic status. The questionnaire was in English and translated into the Pashto, 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 on 40 respondents who were not part of the current sample. After pre-testing, minor changes in the wording of questions were made.

Data were collected from June to August 2019 through self and interviewer-administered questionnaires. Due to cultural restrictions, these businesses were home-based. Eight experienced assistants were hired to interview the women entrepreneurs. To eliminate potential biases, these female assistants were trained to play their roles in a systematic and standardized manner. Furthermore, these research assistants were highly supervised by the researcher during data collection [61,62].

#### 3.3. Data Analysis

The study participants' responses were analyzed using Statistical Package for Social Sciences (SPSS 25). For coded description, percentages, frequencies, means and standard deviations, descriptive statistics were used. Analysis of variance (ANOVA) was used for predictors having more than two categories while a t-test was applied for categorical variables having two categories. Pearson correlations were used to test the relationships between continuous variables [63]. In multivariate analysis, multiple regression (Equation (2)) was used to examine those predictors that were significant in the ANOVA, t-test, and correlational analysis. All the assumptions for the multiple regression were tested. For instance, for multicollinearity VIF values were calculated. The VIF values less than 10 [64] indicating that there was no multicollinearity in the models. Durbin–Watson test [65] was used for autocorrelation. The Durbin–Watson values range from 0 to 4, while a value of 2 or near to 2, indicates no autocorrelation [66]. Furthermore, the Breusch–Pagan test [67] which have been reported in the literature as a suitable test for large samples to test for heteroscedasticity [68]. The p > 0.05 indicates no heteroscedasticity problem.

$$Y_{ij} = \beta_0 + \beta_{ij} X_{ij} + \mu. \tag{2}$$

where  $Y_{ij}$  = Dependent variable (explained in Section 3.4),  $\beta_0$  = constant,  $X_i$  = predictor variables, (explained in Section 3.5) i = 1 - 504, j = 1 - 9, and  $\mu$  = error term.

# 3.4. Definition of Dependent Variables

Wellbeing is a broad concept, but we have tried to measure women's informal entrepreneurial income as a proxy for wellbeing. The following dependent variables were used in our models:

# Education (EDUC)

Per capita educational expenditures per month were measured, the amount of women entrepreneurial income [69] spent on their children's education.

# • Health (HLTH)

Per capita household health expenditures per month were measured by the portion of entrepreneurial income spent on family health expenditures [70,71] divided by the number of family members.

Sustainability **2021**, 13, 10262 7 of 21

#### Entertainment (ENTR)

Per capita entertainment expenditures per month were measured by the amount of entrepreneurial income spend on recreational activities divided by the number of family numbers.

#### • Household: (HOUS)

Per capita household expenditures per month were measured by the proportion of entrepreneurial income spend on household expenditures [72] divided by the number of family members.

## • Social (SOCL)

Per capita social expenditures per month were measured by the entrepreneurial income spent on social activity expenditures [49,72] divided by the number of family members.

#### • Miscellaneous: (MISC)

Per capita miscellaneous expenditures per month were measured [72] by expenditures incurred other than the appropriated overheads, such as travel, insurance, or for emergencies, etc., divided by the number of family members.

#### Investment (INVT)

The proportion of entrepreneurial income per month re/invested [43,73] in own or other activities.

#### Savings (SAVE)

The proportion of entrepreneurial income per month set aside as savings [73,74] for future investment or some emergency.

# Charity (CHAR)

The proportion of entrepreneurial income per month given as a charity to the poor or spent on needy people.

# 3.5. Definition of Predictor Variables

The predictor variables included age of the respondents measured in years; marital status [47] included unmarried/married [73]; location indicates whether women reside in an urban or rural location; homeownership indicates [75] whether entrepreneurs have their own home or not; household size was measured as the number of family members; adult family members include family members who have attained the age of majority (18 years); key decision makers refer to who participated in making business decisions; family financial position [50] was measured using three categories: lower than average, average, or better than average family financial position; business type indicates whether participants worked in the manufacturing, trading, or services business; the form of business indicated sole proprietorship or partnership); products offered [3] included dairy, groceries, stitching, hand embroidery, beautician services, cosmetics, meat, and cloth.

#### 4. Results

#### 4.1. Descriptive Statistics

Table 1 reports the descriptive statistics for the sample. The mean age of the respondent was 36 years with an average education of 4.96 (SD = 5.11) years. As Jabeen et al. [14] revealed, 68.33% of the respondents were illiterate, due to strict purdah and cultural pressures. About 82% of the respondents were married, 59% resided in rural locations, and 68.7% owned their homes. The average household size was seven members including four adult family members. We found that 53% of the respondents made their own business decisions, followed by 41.7% that consulted with their families, and 5.4% who sought input from their friends. The women's family financial position indicated that 39.9% of the respondents reported an average family financial position followed by 31.5%

Sustainability **2021**, 13, 10262 8 of 21

indicating a lower-than-average family financial position. Average business experience was eight years with a monthly income of PKR 15532 (As per State Bank of Pakistan, 1PKR = 0.0070864439869USD, 02 May 2019. URL: http://www.sbp.org.pk/ecodata/Rates/WAR/WAR-History.asp (accessed on 31 May 2019)). The mean actual family expenses were PKR 39826, while their needed income for expenditures was reported PKR 49940. The difference between the actual and needed family expenditures was reported as PKR 10114, indicating an inadequacy/deficit in meeting the level of required household expenditures.

**Table 1.** Descriptive Results for Study Variables.

Variables	Coding and Description	N(n)	%	Mean	SD
Age	Participant's age in years	504	-	36.43	8.87
Education	Participant's education as a year of schooling	504	-	4.96	5.11
Marital status	0 = Single	88	18.0	-	-
Marital status	1 = Married	416	82.0	-	-
Participant's location	0 = Urban	206	40.9	-	-
Tarticipant's location	1 = Rural	298	59.1	-	-
Homeownership	0 = No	158	31.3	-	-
Homeownership	1 = Yes	346	68.7	-	-
Household size	All members of the family	504	-	6.95	2.28
Adult family members	Adult family members	504	-	4.08	2.023
•	1 = Herself (Entrepreneur)	267	53.0	-	-
Key Decision makers	2 = Family members	210	41.7	-	-
•	3 = Friends	27	5.4	-	-
	1 = Better than average	144	28.6	-	-
Family financial status	2 = Average	201	39.9	-	-
3	3 = Lower than average	159	31.5	-	-
Experience	Entrepreneurial experience in years	504	_	8.32	5.85
Monthly Income	Income from Business	504	_	15,532.82	11,464.19
Actual family expenses	Actual expenses of the family	504	_	39,826	13,296
Inadequacy household				,	
expenditures	Inadequate household expenditures	504	-	10,114	5831.1
Needed expenses	Needed expenses of their family	504	-	49,940	13,305.75
_	Trade	242	48.0	-	-
Type of business	Manufacturing	92	18.3	-	-
	Service	170	33.7	-	-
T (1 :	1 = Sole proprietorship	442	87.7	-	-
Form of business	2 = Partnership	62	12.3	-	-
	0 = Dairy	46	9.1	-	-
	1 = Grocery	106	21.0	-	-
	2 = Stitching	83	16.5	-	-
Products/services	3 = Hand Embroidery	59	11.7	-	-
provided	4 = Beautician	28	5.6		
•	5 = Cosmetics	42	8.3	-	-
	6 = Meat	27	5.4	-	-
	7 = Cloth	113	22.4	-	-
	Children's education	504	=	3015.93	2182.62
	Health care	504	_	1812.02	1473.91
	Entertainment	504	-	615.16	1162.73
	Household expenses	504	-	3985.30	3702.33
Business income spent	Social activities	504	_	749.46	873.64
- T	Other Expenditures	504	_	2742.27	2456.57
	Investments	504	_	1177.62	1882.20
	Savings	504	_	1082.60	1488.24
	Charity	504	_	352.45	644.59

Note. Authors' calculations. SD = Standard Deviation.

Sustainability **2021**, 13, 10262 9 of 21

About half of the entrepreneurs were engaged in trade business activities, with 87.7% being sole owners of the business. Just over 22% of women entrepreneurs were engaged in the cloth businesses, followed by grocery (21%) and hand embroidery (16.5%). Entrepreneurial income was allocated to meet various household expenses. For example, the average spending on their children's education was PKR 3015.93. In addition to spending on children's educational wellbeing, women entrepreneurs used their incomes to enhance family health, entertainment, household expenditures, social activities, and other expenditures. Women also invested, saved, and gave some portion of their earnings to charity. Finally, urban women invested more of their entrepreneurial earnings than rural women entrepreneurs.

# 4.2. Correlational Analysis

Pearson correlations between the continuous variables are reported in Table 2. Those variables which showed significant relationships (p < 0.05) were reported in the regression models (Table 5). Age was negatively correlated with social and charity expenditures but positively related to business experience. Household size showed a negative relationship with education, housing, entertainment, social, miscellaneous, and investment expenditures. There was a negative relationship between education and housing expenses for adult family members.

# 4.3. Contribution of Entrepreneurial Income to Different Areas

To compare group means (Table 3), we used the independent samples *t*-tests [76]. Married women were spending PKR 585.98 and 408.73 on average on EDUC and MISC, respectively, as compared to single women who invested and saved more than married women. Urban women entrepreneurs reported significantly higher investments (PKR 1525.68) than rural women (PKR 1006.14). Women entrepreneurs who did not own their homes reported more education, health, entertainment, and savings, while homeowners reported more investments than women entrepreneurs who did not own their homes. Women entrepreneurs who are independent (make their own decisions) in their decision making spent more on education, entertainment, miscellaneous expenditures, social, and saved more of their income, followed by those women who consulted with their family, while those who consulted with friends reported more miscellaneous expenditures. The results showed that all entrepreneurial activities played a significant role in the family, economic and societal wellbeing.

Entrepreneurs who report a better than average family financial position indicated higher spending on education (p < 0.001), entertainment (p < 0.010), miscellaneous expenditures (p = 0.001), SOCL (p = 0.058) while more investment (p = 0.057) were recorded by those with above average family financial position.

These women entrepreneurs were engaged in different business activities. Women entrepreneurs engaged in the service sector reported more expenditures on health, entertainment, and housing, while trade businesswomen reported more investment than manufacturing and service sector entrepreneurs. Women who were sole proprietors spent more on education and health than businesswomen in partnerships. Beauticians reported the highest expenditure levels for education, housing, entertainment, social, investment, savings, and charity followed by cloth businesses while cosmetics women entrepreneurs reported more miscellaneous expenditures followed by cloth entrepreneurs. It implies that the role of beautician services and cloth in wellbeing is more than other products offered. Beauticians, cosmetics, and cloth businesses are emerging businesses in Pakistan.

Sustainability **2021**, 13, 10262 10 of 21

 Table 2. Correlation Coefficients for Continuous Study Variables.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1-Age (Years)	1													
2-Education level (Years)	-0.201 **	1												
3-Household size	0.075	0.034	1											
4-Adult family members	0.065	0.115 *	0.326 **	1										
5-Experience	0.640 **	0.029	0.055	0.154 **	1									
6-EDUC	-0.037	-0.058	-0.387**	-0.152**	0.057	1								
7-HLTH	-0.053	0.017	-0.331**	-0.105*	0.034	0.318 **	1							
8-ENTR	-0.057	0.001	-0.193**	-0.071	0.044	0.344 **	0.709 **	1						
9-HOUS	-0.086	0.009	-0.298 **	-0.071	0.028	0.499 **	0.802 **	0.802 **	1					
10-SOCL	-0.092*	0.007	-0.236 **	-0.047	0.007	0.457 **	0.601 **	0.554 **	0.647 **	1				
11-MISC	0.042	0.034	-0.268 **	-0.061	0.025	0.102 *	0.345 **	0.429 **	0.369 **	0.449 **	1			
12-INVT	-0.081	0.007	-0.123**	-0.026	0.016	0.167 **	0.645 **	0.655 **	0.645 **	0.603 **	0.321 **	1		
13-SAVE	-0.087	0.06	-0.054	-0.026	-0.003	0.140 **	0.697 **	0.725 **	0.691 **	0.459 **	0.311 **	0.700 **	1	
14-CHAR	-0.089*	0.003	-0.019	0.024	0.006	0.254 **	0.463 **	0.500 **	0.480 **	0.521 **	0.292 **	0.595 **	0.474 **	1

Note. Variables 6–11 represent per capita expenditures for their respective items: EDUC = education; HLTH = health; ENTR = entertainment; HOUS = house and home; SOCL = social; MISC = miscellaneous; INVT = investments; SAVE = savings; CHAR = charity. 5-Experience = years of business experience. \* p < 0.05 (2-tailed). \*\* p < 0.01 (2-tailed).

**Table 3.** Entrepreneurial Income Allocation to Different Activities by Socioeconomic Variables and Business Types.

Variables	EDUC	HLTH	ENTR	HOUS	SOCL	MISC	INVT	SAVE	CHAR
Marital status									
Single	17.40	331.15	75.78	569.03	116.09	551.50	1803.41	1581.93	247.58
Married	585.98	281.66	107.39	653.40	122.75	408.73	1045.24	976.97	374.64
<i>p</i> -value	0.000 ***	0.112	0.202	0.280	0.736	0.006 ***	0.001 ***	0.001 ***	0.093 *
Location									
Urban	452.98	288.96	94.66	625.24	117.28	419.63	1425.68	1174.71	386.75
Rural	510.02	291.22	106.86	647.96	124.55	443.35	1006.14	1018.93	328.75
<i>p</i> -value	0.129	0.925	0.524	0.707	0.634	0.556	0.014 **	0.248	0.321
Home ownership									
No	579.20	324.20	135.61	773.58	133.45	464.45	932.53	1252.09	392.32
Yes	444.47	274.82	86.47	577.07	116.13	419.60	1289.54	1005.20	334.25
<i>p</i> -value	0.001 ***	0.052 *	0.015 **	0.002 ***	0.283	0.293	0.048 **	0.084 *	0.349
Key decision makers									
Herself	521.53	317.63	128.26	717.77	139.83	472.25	1314.53	1248.76	366.96
Family	462.95	265.31	76.74	569.92	103.42	376.08	1027.29	902.24	342.52
Friends	327.10	214.36	36.47	391.15	81.00	499.88	992.96	842.22	286.30
<i>p</i> -value	0.037 **	0.031 **	0.007 ***	0.007 ***	0.027 **	0.046 **	0.222	0.028 **	0.791

 Table 3. Cont.

Variables	EDUC	HLTH	ENTR	HOUS	SOCL	MISC	INVT	SAVE	CHAR
Family financial position (FFP)									
Lower than average FFP	329.70	257.90	52.32	482.00	93.34	407.05	955.60	1093.14	333.06
Average FFP	495.85	291.22	114.19	644.37	132.14	458.95	1415.57	1165.67	410.75
Better than average FFP	617.34	318.47	131.19	773.36	133.69	427.73	1090.63	955.00	292.50
<i>p</i> -value	0.000 ***	0.139	0.003 ***	0.001 ***	0.058 *	0.536	0.057 *	0.430	0.220
Type of activities									
Manufacturing	432.07	229.2	54.62	492.02	84.25	319.276	828.80	863.04	333.59
Trade	495.72	296.15	107.38	660.72	129.12	500.424	1280.83	1076.57	356.07
Services	503.44	315.03	119.61	686.66	131.17	400.529	1219.47	1210.00	357.51
<i>p</i> -value	0.371	0.039 **	0.050 *	0.060 *	0.061 *	0.002 ***	0.137	0.197	0.953
Form of business									
Sole	499.01	299.86	104.99	658.35	126.18	439.23	1213.62	1103.19	356.06
Partnership	399.01	222.12	79.63	498.39	88.95	393.94	920.97	935.81	326.77
<i>p</i> -value	0.075 *	0.030 **	0.376	0.076 *	0.102	0.452	0.252	0.407	0.738
Products provided/services									
Dairy	521.04	247.64	56.07	519.94	107.20	356.45	745.11	690.00	225.32
Grocery	424.68	286.21	78.27	595.25	99.07	486.22	955.81	971.33	312.29
Stitching	461.00	235.37	61.59	484.39	86.47	325.19	852.17	777.47	266.75
Hand embroidery	404.21	223.51	54.58	480.20	111.66	311.17	878.64	853.90	331.69
Beautician	858.01	464.41	220.30	1156.87	248.89	428.53	1932.14	1831.07	616.43
Cosmetics	412.80	282.94	144.89	649.69	85.87	523.91	1072.86	1170.00	253.74
Meat	398.61	280.41	81.62	592.98	118.92	462.40	1077.78	1061.48	322.59
Cloth	548.52	349.01	156.65	802.89	161.64	521.41	1834.60	1479.91	494.87
<i>p</i> -value	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.009 ***	0.000 ***	0.001 ***	0.035 **

Note. Field survey, 2019. Per capita expenditures for: EDUC = education; HLTH = health; ENTR = entertainment; HOUS = house and home; SOCL = social; MISC = miscellaneous; INVT = investments; SAVE = savings; CHAR = charity. \* $p \le 0.10$ . \*\* $p \le 0.05$ . \*\*\*  $p \le 0.01$ .

Sustainability **2021**, 13, 10262 12 of 21

# 4.4. Entrepreneurial Contributions to Family Expenditures

These women entrepreneurs offered different products/services in their localities. Their contribution in family expenditures financing cannot be ignored as they spent their monthly income earned from their business activities to enhance their own and family wellbeing. The results (Table 4) show that, on average, beautician businesses reported a contribution of PKR 20,646, followed by cloth business (PKR 19,510), then grocery businesses (PKR 15,237). Actual family expenditures exceeded women entrepreneurs' monthly business income. For example, women who were engaged in cloth business reported PKR 19,510 in income, but their actual family expenditures were PKR 41,934.

## 4.5. Regression Analyses

The regression results (Table 5) amplify the findings reported above. All of the assumptions for multiple regression were satisfied. The VIF values less than 10 [64] represent that there was no multicollinearity in the models (see Appendix A Table A1). Furthermore, the Durbin–Watson values near 2 indicate no autocorrelation, while the Breusch–Pagan test (p > 0.05) implies no heteroscedasticity. Here, we highlight some of the noteworthy results for different independent variables (i.e., marital status, size of household, type of business).

Married women entrepreneurs spent PKR 522.14 more than single entrepreneurs on children's educational expenses. However, married women reported lower levels of savings (PKR 633.77), investments (PKR 872.11), and miscellaneous expenses (PKR 132.55) than single women entrepreneurs. Finally, married women's spending (CHAR) was PKR 132.46 higher than single women's.

The household size analysis showed that when there is a one-member increase in family size, the per capita educational expenditures decrease by PKR 62.43. The increase in the household size decreased health expenditures by PKR 35.93. As expected, the income/spending per capita decreases due to having more members of the family. The increase in the household size also negatively affects miscellaneous expenditures by PKR 52.46, lowered household spending by PKR 75.25, and decreased investments. The per capita household expenditures model showed that when there is an increase in the household size the HOUS decrease by PKR 75.25. As expected, the income/spending per capita decreases due to more heads of the family. An increase in the household size decreased the health spending by PKR 35.93. An increase in the household size decreases investment amounts by PKR 85.56. The results show that different socioeconomic and demographic factors played a different role in wellbeing indicators.

The type of business also played a role. The services business sector women reported higher health expenditures by PKR 73.98 compared to the manufacturing businesswomen. The dairy, stitching, hand embroidery, and cosmetics women entrepreneurs reported lower health expenditures than the reference category (i.e., beauticians). The entrepreneurs engaged in dairy, grocery, stitching, and hand embroidery reported lower entertainment, savings, and charity expenditures than beautician businesswomen.

**Table 4.** Women Entrepreneurial Contribution in Family Expenditure Financing and its Inadequacy.

Products/Services	Dairy Products	Grocery	Stitching	Hand Embroidery	Beautician	Cosmetics	Meat	Cloth
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Contribution	13,612.77	15,236.95	12,648.19	12,509.32	20,646.43	14,877.38	14,570.74	19,510.18
Contribution	(7748.64)	(9156.8)	(8195.71)	(10,002.01)	(13,325.48)	(10,546.87)	(8782.38)	(15,805.81)
A street form: 1 dite	40,615.96	41,040	37,078.31	36,774.58	40,725	40,769.05	37,629.63	41,933.63
Actual family expenditures	(14,056.39)	(13,540.93)	(11,077.26)	(9858.37)	(15,874.4)	(12,640.27)	(13,174.56)	(14,981.74)
Niceded femiles arm and items	50,265.96	51,045.71	48,322.89	46,744.07	49,517.86	50,754.76	47,414.81	52,040.71
Needed family expenditures	(12,796.57)	(13,597.33)	(12,445.96)	(9889.9)	(14,967.55)	(12,393.51)	(12,824.1)	(15,129.77)
Inadequacy in family	9650.00	10,005.71	11,244.58	9969.49	8792.86	9985.71	9785.19	10,107.08
expenditures	(5811.69)	(5933.49)	(5521.65)	(5369.56)	(6221.35)	(5511.74)	(4688.75)	(6465.62)

 Table 5. Multiple Regression Analysis Predicting Earning Expenditures in Various Areas.

Variables	EDUC	HLTH	ENTR	HOUS	SOCL	MISC	INVT	SAVE	CHAR
Age	-	-	-	-	-1.13 *	=	-	-	-5.44 *
S	-	_	-	-	(0.83)	-	-	-	(3.25)
Marital status	522.14 ***	_	-	-	-	-132.55***	-872.11***	-633.77 ***	132.46 *
	(39.15)	_	-	-	-	(49.94)	(226.32)	(174.22)	(75.48)
Location	· -	_	-	-	-	-	-360.16 **	-	
	<del>-</del>	-	-	-	-	-	(175.69)	-	-
Home ownership	-11.21	-56.59 **	-22.80	-100.43	-	-	398.19 **	-323.51 **	-
1	(34.00)	(23.62)	(22.24)	(67.45)	-	-	(199.28)	(140.39)	-
Household size	-62.43 ***	-35.93 ***	-14.34 ***	-75.25 ***	-14.12***	-52.46 ***	-85.56 **	-	-
	(6.45)	(5.14)	(3.99)	(12.15)	(3.16)	(8.33)	(35.73)	-	-
Adult family members	11.21	3.02	· -	· -	-	· -	· -	-	-
•	(7.29)	(5.80)	-	-	-	-	-	-	-
Key decision makers	• • •	, ,							
Friends	R	R	R	R	R	R	-	R	-
Herself	91.90 ***	38.80 *	48.67 ***	130.11 **	38.18 **	64.66 *	-	260.78 *	-
	(28.87)	(22.87)	(18.68)	(56.73)	(14.97)	(39.15)	-	(134.23)	-
Family	26.69	-36.35	-26.24	-110.05	-5.81	93.33	-	-257.44	-
,	(64.58)	(51.10)	(41.99)	(127.62)	(33.19)	(87.40)	-	(300.31)	-

 Table 5. Cont.

Variables	EDUC	HLTH	ENTR	HOUS	SOCL	MISC	INVT	SAVE	CHAR
Family financial position									
Lower than Average	R	-	R	R	R	-	R	-	-
Average	46.60	-	51.11 **	121.99 *	34.86 **	-	579.71 ***	-	-
Ü	(35.37)	-	(22.44)	(68.28)	(17.64)	-	(207.09)	-	-
Better than average	136.04 ***	-	75.12 ***	265.90 ***	48.68 ***	-	585.38 **	-	-
-	(42.41)	-	(26.70)	(81.08)	(18.60)	-	(259.08)	-	-
Type of business									
Manufacturing	-	R	R	R	R	R			
Trading	-	25.58	16.06	54.35	25.51	139.46 **	-	-	-
	-	(32.51)	(26.44)	(80.29)	(20.90)	(55.02)	-	-	-
Services	-	73.98 **	43.21	117.02	29.35	96.75	-	-	-
	-	(36.19)	(29.47)	(89.52)	(23.32)	(61.50)	-	-	-
Form of business	-34.53	-48.72	-	-79.14	-	-	-	-	-
	(43.07)	(34.33)	-	(85.28)	-	-	-	-	-
Products offered									
Beautician	R	R	R	R	R	R	R	R	R
Dairy	-274.81 ***	-112.75 *	-115.46 **	-451.43 ***	-106.32**	9.57	-991.59 <b>**</b>	-1068.51 ***	-368.44 **
,	(74.16)	(63.59)	(52.05)	(157.99)	(41.22)	(108.16)	(436.80)	(343.12)	(152.98)
Grocery	-331.60 ***	-57.60	-94.01 **	361.01 **	-112.12 ***	152.40	-880.71 **	-815.269 ***	-270.90 **
,	(66.95)	(57.47)	(47.24)	(143.72)	(37.39)	(97.17)	(391.40)	(306.17)	(136.66)
Stitching	-326.43***	-164.50***	-137 ***	-572.52 ***	-139.13 ***	-25.03	-968.04 **	-1000.71 ***	-328.07 **
C	(68.40)	(54.40)	(44.66)	(135.56)	(35.40)	(92.46)	(402.25)	(314.53)	(139.73)
Hand embroidery	-364.86 ***	-138.93 **	-127.07 ***	-506.69 ***	-111.06 ***	-20.17	-946.54 <b>**</b>	-909.66 ***	-280.61 *
,	(71.92)	(58.84)	(48.18)	(146.92)	(38.06)	(99.97)	(418.68)	(330.28)	(146.24)
Cosmetics	-314.18***	-109.17 *	-51.34	-388.86 **	-144.16 ***	121.20	-867.78 *	-705.31 **	-322.72 **
	(76.37)	(61.64)	(50.44)	(153.33)	(39.94)	(104.79)	(448.76)	(351.35)	(156.34)
Meat	-299.57 ***	-88.96	-82.81	-359.49 **	-91.27 <b>**</b>	70.38	-737.06	-779.03 <b>**</b>	-250.15
	(83.99)	(69.99)	(57.23)	(173.79)	(45.37)	(119.54)	(493.86)	(391.52)	(172.82)
Cloth	$-214.33^{***}$	-22.95	-21.91	-188.69	-62.90 <sup>*</sup>	119.68	-13.40	-311.74	-102.40
	(65.94)	(57.46)	(47.22)	(143.34)	(37.34)	(97.81)	(387.24)	(304.14)	(134.79)
$R^2$	0.471	0.175	0.13	0.195	0.136	0.141	0.112	0.09	0.041
F-value	27.08	7.408	4.724	7.310	5.059	5.939	4.229	4.433	2.269
p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022

Note. R = Reference category. Per capita expenditures for: EDUC = education; HLTH = health; ENTR = entertainment; HOUS = house and home; SOCL = social; MISC = miscellaneous; INVT = investments; SAVE = savings; CHAR = charity. The figures in parenthesis are standard errors while the others are the unstandardized coefficients. \* p < 0.10. \*\*\* p < 0.05. \*\*\*\* p < 0.01.

Sustainability **2021**, 13, 10262 15 of 21

#### 5. Discussion

The findings showed that women's entrepreneurial income from their small home-based businesses plays a significant role in the individual and family economic wellbeing. Women entrepreneurs generate income while facing gender inequality, lacking fundamental legal rights to participate in economic activities, limited mobility, barriers to receiving an education and developing skills, high domestic workload, limited access to markets, poor working conditions, low wages, restricted freedom of expression, and constraints on their participation in a mixed-gender environment because of sociocultural norms that make them dependent on their families while ignoring them in the process of mainstream development [77]. Regardless of their income level, women's contributions to financial wellbeing were not uniform for all business types. However, socioeconomic factors play an important role in children's education. Age negatively affected social and charity expenditures. For married women, entrepreneurial income positively contributed to children's educational expenses and charity contributions while negatively affecting miscellaneous expenditures, investments, and savings.

The results support the findings of Khalili et al. [47], conducted in Iran, mothers spend more on their children's educational wellbeing. This suggests the high value placed on education despite the low literacy levels of these women entrepreneurs. While income reduction affects the per capita educational expenditure, women entrepreneurs' income is necessary in reducing the financial educational burden of the household. Other findings indicate that children's education expenditures increase as social class increases [50]. Furthermore, to meet these educational expenditures, women appear to reduce their savings, investments, and other household expenditures. The reduction in savings and investments means spending less on business expenses, potentially generating lower revenues which may compel them to exit their businesses.

Considering rural and urban business locations, rural women's investments were lower than that of urban women. This is consistent with results reported by a study in India where women are risk averse thereby invest less because they lack confidence and financial knowledge [51]. However, their husband's or family member's consultation can play an important role in investment decision making.

Women entrepreneurs who owned a home spent less on health care and savings but invested more of their income. The positive impact of homeownership on investment gives an individual an incentive to improve their financial wellbeing [75]. An increase in household size negatively affected expenditures on education, health, entertainment, housing, miscellaneous, and investment. Our results support the findings that educational expenditures were inelastic [47]. This highlights the dependency of the family members on women entrepreneurs' income. Nevertheless, the findings from Iran, showed that household expenditures were more strongly connected to income [47]. The findings on health expenditures are consistent with [53] who reported the adverse relationship between family size and household expenditures in Israel.

The results are also in line with findings indicating that large families spend less on recreation, educational, and other household expenditures [54]. Household consumption is also a direct estimate of goods and services that contribute to determining their family's living conditions [37]. Women entrepreneurs' freedom of decision-making positively affected expenditures on education, health, entertainment, housing, social, and miscellaneous items as well as savings compared to the reference category involving the family in decision-making. Women's contributions are essential to maintaining family financial wellbeing and, in turn, their role in the family financial decisions are increasing [51]. Better than average family financial position contributed positively to the education expenditures along with entertainment, housing, social, and investment than the average FFP and the reference category lower than average FFP.

Financially secure families are better able to contribute to individual and family economic wellbeing, thereby reducing family dependency on entrepreneurial income for meeting household expenditures, which helps them to better focus on improving their

Sustainability **2021**, 13, 10262 16 of 21

children's education and the health wellbeing of the family. However, they can save to re/invest in the future, which has a positive impact on their economic wellbeing as well as on regional economic development [55]. Furthermore, a study found that poorer families' needs to cut daily utilities, education, medical care, and leisure activities expenditures due to their having fewer economic resources and more family needs and demands which have a negative impact on household economic wellbeing [78]. In the case of children's educational expenditures, all the business types of women entrepreneurs contributed negatively to most expenditure areas, except miscellaneous expenditures, compared to beauticians as a reference category.

Among other types of home-based entrepreneurship, beautician businesses are the most common type of business in developing countries in South Asia because women want a close association with family/home [3] to facilitate managing their work-life interactions. Beautician businesses can also enhance the cosmetics businesses because there is an overlap in products and demand. As Jabeen et al. [14] reported, 71.88% of women's activities are indoor and confined to their homes. Irrespective of the women's home confinement, income generated by women-run businesses helps to empower women, thus helping to decrease gender inequality [79]. Furthermore, these women entrepreneurs contribute to family economic wellbeing. In turn, women entrepreneurs need family support to mitigate the risk of losses and provide supplies and finance [80]. This support is consistent with Sustainable Family Business Theory [17–19].

Family support provides capital, Qarzi Hasana (interest-free loans), and access to markets. Interest-free financial support helps in cost minimization that contributes to more competitive businesses in a challenging environment [81]. A study in Spain reported that family financial support makes entrepreneurs more successful. In addition, family members motivate, encourage, assist, advise, provide free start-up financing, and additional capital to businesswomen [82]. Most of the women's entrepreneurial engagements are in trade, suggesting that trade integration will increase formal entrepreneurship, thereby decreasing the degree of informality [83].

Women entrepreneurs in a developing context face many challenges and constraints. These women are often considered to be "necessity" driven entrepreneurs but they also exploit opportunities in their environments [84]. These contributions transcend the income that they generate. This is the essence of the multiplier effect [21] that affects women's satisfaction and work-life integration that has an impact not only on women's wellbeing but that of their families, children, communities, and society. We argue that wellbeing in a developing context emanates, first and foremost, from economic wellbeing. Thus, our focus is on women's entrepreneurial income. However, economic wellbeing is the foundation for family, community, and societal wellbeing. The contributions of women's entrepreneurship to sustainability, economic development, and wellbeing have not been fully recognised.

#### 6. Policy Implications

This study has several implications for the policymakers and governments. The findings provide an understanding of women's entrepreneurial effectiveness for individual and family wellbeing in the face of economic, cultural, and institutional barriers. In the patriarchal context, which influences the ideology of these women entrepreneurs, a comprehensive gendered approach to entrepreneurial support will result in an engaging entrepreneurial development policy and practice. Restrictions on economic activities and freedom of expression affect women's economic and social wellbeing that can affect their mental, psychological, and physical health. These business engagements can motivate women entrepreneurs to save, invest for financial security, and increase wellbeing. The Benazir Income Support Program (BISP) and Ehsaas program should assist women entrepreneurs by reducing the financial burden on women and their families. The theoretical contribution derived from the study of women entrepreneurs in the developing world is the "multiplier effect" [21], demonstrating women's pervasive contributions to their families, households, and overall economic growth through wellbeing.

Sustainability **2021**, 13, 10262 17 of 21

#### 7. Study Limitations and Future Research

While this study contributes to understanding the impact of women's home-based businesses on their individual and family wellbeing, there are several possible limitations. First, all the variables were self-reported using a cross-sectional design. This precludes making any causal statements about the findings. Second, the target participants were women home-based entrepreneurs, who might not be representative of entrepreneurship in general. Third, we inferred wellbeing from the allocation of income to various areas such as children's education. Further, women's entrepreneurial income distribution does not reflect the entirety of possible family expenditures. Finally, this study was carried out in district Mardan, Pakistan. Thus, the results will need to be confirmed in other regions of Pakistan.

There are many avenues for additional work. Following women's businesses over time would be useful for assessing the impact of the study variables longitudinally. Future studies are needed to increase our understanding of women home-based entrepreneurs' motivations and the challenges faced by them. Future studies can be conducted to explore other women's engagements in other sectors of the economy. Qualitative studies are also encouraged to develop deeper insights into the determinants of wellbeing among women entrepreneurs.

# 8. Conclusions

The impact of entrepreneurial income on individual and family wellbeing has been difficult to assess because its impact is multifaceted, particularly when considering informal women entrepreneurs in the developing world. Regardless of their income level, this study finds that women's business income contributes to family, economic, and societal wellbeing. Yet, we know that the impact of these businesses goes well beyond their economic impact on household finances. Women businesses have several consequences because of the multiplier effect derived therefrom [21]. These economic activities affect women's self-esteem and wellbeing, help in managing work–family interactions, provide flexible working hours, and enhance the welfare of children and other household members.

Because of the far-reaching impact of women's entrepreneurship, these engagements need greater financial support, better access to markets, and more training opportunities that can multiply the substantial benefits derived from such businesses. By receiving 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.

**Author Contributions:** S.M. conceptualized the study, collected and analyzed the data. X.K. supervised the whole study from start to end. S.E.S. drafted the paper with the help of S.M. and N.J.B. contributed to the theory, and performed the proofreading and editing of the study. All authors have read and agreed to the published version of the manuscript.

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# Appendix A

Table A1. Testing the Assumptions of the Models. (VIF Test, Durbin-Watson, Breusch-Pagan).

	EDUC	HLTH	ENTR	HOUS	SOCL	MISC	INVT	SAVE	CHAR
Age	-	-	-	-	1.109	-	-	-	1.037
MS	1.185	-	-	-	-	1.04	1.168	1.07	1.02
Location	-	-	-	-	-	-	1.175	-	-
Home ownership	1.335	1.009	1.338	1.339	-	-	1.338	1.038	-
Household size	1.157	1.156	1.04	1.045	1.043	1.037	1.04	-	-
Adult family members	1.172	1.163	-	-	-	-	-	-	-
Decision Makers									
Friends (Ref)									
Herself	4.402	4.354	4.403	4.43	4.419	4.345	4.375	4.29	-
Family	4.381	4.359	4.446	4.464	4.433	4.402	4.449	4.363	_
Family Financial Position									
Lower than average (Ref)									
Average	1.609	_	1.949	1.534	1.51	_	1.619	-	_
Better than Average	2.085	-	1.528	1.949	1.509	-	2.287	-	-
Type of business									
Manufacturing (Ref)									
Trading	-	1.263	1.258	1.264	1.279	1.498	-	-	-
Services	-	1.259	1.254	1.26	1.254	1.475	-	-	-
Form of business	1.074	1.07	_	1.087	_	_	-	-	_
Products offered									
Beautician (Ref)									
Dairy	2.495	2.738	2.493	2.494	2.513	2.491	2.522	2.435	2.458
Grocery	3.967	4.464	3.96	3.989	3.991	3.902	3.957	3.782	3.826
Stitching	3.453	3.424	3.425	3.425	3.447	3.375	3.493	3.329	3.336
Hand embroidery	2.868	2.982	2.862	2.895	2.86	2.809	2.842	2.758	2.745
Cosmetics	2.39	2.381	2.345	2.356	2.356	2.33	2.406	2.307	2.319
Meat	1.919	2.043	1.915	1.916	1.928	1.917	1.96	1.901	1.881
Cloth	4.057	4.077	4.043	4.046	4.062	3.997	4.099	3.936	3.925
Durbin Watson	1.975	2.054	1.981	2.067	2.145	2.09	2.061	1.97	1.961
Breusch–Pagan	0.051	0.175	0.16	0.14	0.23	0.09	0.20	0.08	0.283

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