



Love of Work or Love and Work: Does a Business Owner's Compulsion to Work Pay Off?

Renee D. Wiatt¹ · Maria I. Marshall¹ · Yoon G. Lee²

Accepted: 6 February 2024
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Abstract

A business owner's compulsion to work is a condition that can have jarring effects on business-owning families. A compulsion to work has been defined as a component of workaholism. A random sample of 478 small business owners in the United States were classified as "compulsive" and "non-compulsive" owners using cluster analysis. A probit regression was used to determine the characteristics associated with being a compulsive owner. The probability of being a compulsive owner was lower for female owners, was higher as the number of children in the house increased, and was inversely related to family-business functioning. Further analysis found that compulsive owners did not have higher business incomes than non-compulsive owners. Thus, a compulsion to work did not appear to pay off for small business owners. We contribute to the literature by identifying factors associated with compulsive owner tendencies and if those tendencies lead to higher business income.

Keywords Compulsive owner · Family business performance · Gender · Small business · Work-family balance · Workaholism

Introduction

Previous research and stereotypes of successful business owners tend to portray entrepreneurs and business owners as workaholics (Akande, 1994; Gorgievski et al., 2010; Smilor, 1997). However, there is scant research focused on small business owners in relation to compulsion to work in the literature. Workaholism is an addiction that is not exclusive to one industry or large corporations. Workaholism can occur in family businesses, small businesses, and large and small corporations. Entrepreneurship literature has focused on how personal values orientation versus profit growth orientation

affects performance, but few researchers have focused on the impact of workaholism on business performance (Gorgievski et al., 2011).

Workaholism can be measured in terms of working *excessively* and *compulsively* (Bakker et al., 2014; Caesens et al., 2014; Gillet et al., 2017; Kravina et al., 2014). Measuring workaholism has evolved over time and many scales exist. Taris et al. (2005) found that among a sample of 356 individuals, the Compulsive Tendencies subscale of the Work Addiction Risk Test (WART) is sufficient to model workaholism. Mosier (1983) characterized workaholics as those individuals working over 50 h a week. However, there is consensus among researchers that workaholism is an addiction (Bakker et al., 2009; Oates, 1971); an addiction that is copiously deeper than the number of hours worked (Spence & Robbins, 1992). It can also be measured by the following three components: work involvement, drive to work, and work enjoyment (Andreassan et al., 2013). In this study, we focus on the compulsive aspect of workaholism.

The working definition of a compulsive owner used in this study was premised on Spence and Robbins' (1992) measures of the workaholism triad along with the Compulsive Tendencies subscale (Taris et al., 2005). The issue with workaholism is that although it causes problems in families,

✉ Renee D. Wiatt
reneewiatt@purdue.edu

Maria I. Marshall
mimarsha@purdue.edu

Yoon G. Lee
yoon.lee@usu.edu

¹ Department of Agricultural Economics, Purdue University, 403 Mitch Daniels Blvd, West Lafayette, IN 47907, USA

² Department of Human Development and Family Studies, Utah State University, 2905 Old Main Hill, Logan, UT 84322-2905, USA

it is socially acceptable, particularly among small business owners who have a passion for what they do and may not think of their long hours as “work”. In fact, workaholics are often perceived as hard workers (Yaniv, 2011). Work-family spillover and family-work spillover have been positively correlated with work involvement, drive to work, and work enjoyment (Andreassen et al., 2013). A compulsion to work negatively affects the business owner and the owner’s family (Bakker et al., 2009), but does it have a positive effect on the business?

The integration of the family and the business in small family businesses has been studied, but workaholism (and the sub-component of compulsion to work) in relation small business owners has received little attention. To our knowledge, only one other study has focused on small business owners’ workaholism tendencies and that study was qualitative in nature (Dobrowolska et al., 2018). No other studies were found focusing on small business owners’ compulsion to work. This study fills that gap by exploring the effect that family, business, and owner characteristics have on the proclivity of compulsion to work among small business owners via quantitative analysis. Specifically, small business owners were grouped by compulsive work behaviors, and hypotheses were formed to test if gender, number of children, copreneurial structure, and family-business functioning are associated with business owner’s compulsion to work. This study further investigated whether compulsive owners have higher business income than their non-compulsive counterparts.

Literature Review

Workaholism and Compulsion to Work Defined

The definition of a workaholic has transformed through research and new findings. Mosier (1983) characterized workaholics as those individuals working over 50 h a week. However, being a workaholic is driven by more than the number of hours worked; it is a set of behaviors that classifies an individual as a workaholic (Spence & Robbins, 1992). Workaholism has been found to negatively impact both family life and private life in many ways. Workaholism can influence one’s physical and mental health as well as partner relationships (Bakker et al., 2009).

Spence and Robbins (1992) defined workaholism “in terms of high scores on measures of work involvement and drivenness and low scores on a measure of enjoyment of work” (p. 160). The Workaholism Battery (WorkBAT) was developed by Spence and Robbins (1992) to categorize individuals as workaholics, work enthusiasts, relaxed workers, unengaged workers, and disenchanting workers. This scale, based on work involvement, drive to work, and work enjoyment, was further validated by McMillan et al. (2002).

Several previous studies have measured workaholism by utilizing the Dutch Workaholism Scale (DUWAS), which consists of two separate subscales that measure working *excessively* and working *compulsively* (Bakker et al., 2014; Caesens et al., 2014; Gillet et al., 2017; Kravina et al., 2014). At the intersection of high activation (i.e., high involvement or activity level in the business) and low pleasantness is workaholism, while burnout is found at the intersection of low pleasantness and low activation (i.e., low involvement or activity level in the business) (Innanen et al., 2014; Russell, 1980). Some other studies have measured workaholism by use of either the compulsive tendencies subscale of the Work Addiction Risk Test (WART) (Bakker et al., 2009; Huang & Wang, 2013), the Workaholism Battery (WorkBAT) (Levy, 2015), or the Scale of Workaholism as Behavioral Tendencies (SWBT) (Hauk & Chodkiewicz, 2013). Taris et al. (2005) noted that the compulsive tendencies subscale of the WART is sufficient to model workaholism. Further, Aziz et al. (2013) created the Workaholism Analysis Questionnaire (WAQ) which was derived from the WART. In particular, the WAQ focused on the imbalance between work and family resources which often originates from workaholism.

Andreassen et al. (2013) measured workaholism based on the three components of work involvement, drive to work, and work enjoyment. Dumas and Perry-Smith (2018) also measured work absorption from Rothbard’s engagement scale. Being driven to work hard and the motivation to do so were found to differ between senior positions and junior positions (Innanen et al., 2014; Jackson et al., 2016). It seems that while those in senior positions work hard to achieve more gains, those in lower-level positions work hard to “avoid punishment” (p. 118). Innanen et al. (2014) found similar results such as high levels of workaholism at the beginning of educated individuals’ careers. However, workaholism was found to taper off as careers progress.

There are two ways of investigating workaholism, either by looking at variables that influence workaholism or by looking at individuals’ profiles to see what makes each of them a workaholic or not (Gillet et al., 2017). By using multinomial logistic regression, Gillet et al. (2017) identified four profiles that were different in terms of workaholism (very high, moderately high, moderately low, and very low). “Most desirable outcomes” (p. 571) were found among lower levels of workaholism, characterized by less work-family conflict and more harmony in health and wellness. Well-being was inversely related to workaholism in studies by Caesens et al. (2014) and Shimazu et al. (2011). Other studies found that job stress (Spence & Robbins, 1992) and anxiety (Robinson, 1999) were higher in workaholics than in non-workaholics.

Instead of using the 25-item Work Addiction Risk Test (WART) (Robinson, 1999), Taris et al. (2005) used the 9-item Compulsive Tendencies subscale of the WART to

model workaholism. The Compulsive Tendencies subscale includes tendencies such as rushing during work, being over-committed, not leaving time for non-work activities (friends, leisure, family), feeling pressure, and not relaxing while not working. The working definition of a *compulsive owner* used in this study was premised on Spence and Robbins' (1992) measures of the workaholism triad along with the Compulsive Tendencies subscale (Taris et al., 2005). The workaholism triad includes work involvement, drive to work, and work enjoyment, and the triad was used in this study to classify business owners as compulsive and non-compulsive groups.

The first step in our study was to categorize business owners as compulsive or non-compulsive groups based on workaholism behaviors. To categorize two groups, we used three variables available in the 2019 Small Business Values Survey. These variables were the extent to which: (1) family hinders the owner's progress at work, (2) the owner's work demands spill over into their family and hinders family time, and (3) business demands keep the owner from participating equally in household responsibilities and activities. These three characteristics indicate a compulsive owner and ultimately, an unhealthy imbalance between family and work commitments.

Family Business Characteristics, Compulsion to Work, and Business Income

Gender

Shimazu et al. (2011) found higher levels of workaholism among men than women. Huang and Wang (2013) found a stronger relationship between work-family conflict and workaholism in men than in women. Andreassen et al. (2013) found that men and women experienced different effects from the spillovers that occurred between family and work. Women experienced "less negative family-to-work spillover and more positive family-to-work spillover" when compared to men (Andreassen et al., 2013, p. 81). However, Bakker et al. (2009) found no gender differences between workaholism and relationship satisfaction. They did find slightly higher work family conflict levels in male workaholics, but both genders reported more work family conflict when workaholism was present. Male workaholics had higher levels of work-family conflict and emotional distress than female workaholics (Shimazu et al., 2011).

Literature surrounding workaholism and gender has not reached consensus. However, there is a body of literature surrounding marriage tax and fatherhood premium that has consistent findings (Astone et al., 2010; Bianchi et al., 2000; Flaig & Marshall, 2010; Hall & MacDermid, 2009; Mattingly & Bianchi, 2003). The marriage tax and fatherhood premium research may indicate that women perform a higher

proportion of household tasks and childcare. These gendered roles around household tasks may also play a role in workaholism. Gherardi (2015) found that literature focused on work-life balance indicated that for male business owners, work-life balance focused on getting family support at home, but for women businesses owners, work-life balance focused on women needing to find synergies between the two systems of the business and the family. Thus, we hypothesize that women are less likely than men to be compulsive business owners (H1).

Number of Children

Previous research has found a positive association between family status and workaholism. More negative spillover between the family and work units was present when there were children living at home (Andreassen et al., 2013). Individuals without a spouse and without children were less absorbed by work (Dumas & Perry-Smith, 2018). Dumas and Perry-Smith (2018) also posited the possibility that married individuals with children had a greater set of non-work demands; thus, pushing those individuals to maximize their time at work. Therefore, individuals with families and children, in order to maintain their positions at work, had to maximize their efficiency and focus both in and away from work. These tighter time limitations related to family demands could push business owners to act more similarly to compulsive owners. These business-owning parents are more likely to have: family hindering progress at work, work spilling into family time, and the business keeping the owner from family demands (cluster variables for compulsive owner behaviors in this study). Therefore, individuals with families and children, in order to maintain their positions at work, had to maximize their efficiency and focus both in and away from work.

A study of wage differences in households by Marshall and Flaig (2014) showed that self-employed women with children made 6% less in wages than childless self-employed women. This phenomenon can be referred to as the "motherhood penalty" (Bakker & Geurts, 2004; Benard & Correll, 2010; Budig & Hodges, 2010; Firestone et al., 1999; Gangl & Ziefle, 2009; Marshall & Flaig, 2014). Aranda and Glick (2014) found that while the motherhood penalty was present, it could be counteracted by placing priority on work instead of family. The literature related to household size and workaholism has led us to hypothesize that business owners with more children are more likely to be compulsive owners (H2).

Copreneurship

Copreneurship, where married couples own and manage a business together, is increasing in popularity (Aladejebi, 2020; Pratt, 2009). However, research on copreneurs is still

emerging. An advantage of a copreneurial business is the synergy that can result in higher achievements, while arguments and instability that arise from financial matters of the business can be a disadvantage (Amubode et al., 2016; Smith, 2000).

For copreneurial businesses, since both spouses can pull their personal resources and social networks into their business, copreneurial businesses can possess more capabilities than non-copreneurial businesses (e.g., greater social reach, more vast kinships, and higher amounts of merit in social situations) (Gorji et al., 2021). However, given the daily interaction of family and business, the functioning of copreneurial businesses is dependent on balancing the couple's household tasks and business management (Fitzgerald & Muske, 2002; Franco & Piceti, 2020). Specifically, the most important factor for successful copreneurial businesses is professionalization, dividing the couple's tasks from business management (Baron & Lachenauer, 2015; Franco & Piceti, 2020).

Copreneurs are different from non-copreneurs. Fitzgerald and Muske (2002) found that copreneurs were more likely to view their business as a way of life rather than a way to earn income and were more likely to work more hours than non-copreneurs. While being challenged with the intertwined life-domains in the context of the family business, copreneurs were found to struggle to craft work-life balance and minimize work-life conflict to enhance their satisfaction with work and business performance (Baron & Lachenauer, 2015; Dreyer & Busch, 2022; Helmle et al., 2014; Rodrigues & Franco, 2021). Given that copreneurial owners work more hours and that copreneurial businesses outperform other forms of family businesses, and that there may be a lack of boundaries between home and work, we hypothesize that copreneur business owners are more likely than non-copreneur business owners to be compulsive owners (H3).

Family Business Functioning

Work-family spillover and family-work spillover were positively correlated with work involvement, drive, and work enjoyment (Andreassen et al., 2013). Workaholism contributed to negative spillover from work to the family unit (Andreassen et al., 2013) and drove work-family conflict in both women and men (Bakker et al., 2009, 2014). Family satisfaction decreased as work-family conflict increased among couples studied by Bakker et al. (2014). Evaluating work-family conflict from an economics perspective where resources such as labor, time, and money are scarce, one would expect that workaholism would exacerbate the conflict between competing systems. Thus, as workaholics are completely engulfed in their work, the few resources available for the family continue to shrink and workaholism progresses (Bakker et al., 2009).

Camaraderie among coworkers has been shown to have a negative effect on workaholism (Caesens et al., 2014). Workaholics have lower job satisfaction (Caesens et al., 2014) and life satisfaction (Innanen et al., 2014) than their non-workaholic counterparts. Spillover from work and a high drive to work can cause high levels of conflict (Fisher et al., 2009; Kravina et al., 2014; Shkoler et al., 2017). Gorgievski et al. (2010) found that business owners were more likely to have higher work engagement and work excessively than their employees but found no differences in their compulsion to work. Farm business-owning couples experienced high levels of tension surrounding work/family conflict.

Rha and Stafford (2001) expanded on the use of the family APGAR scale, which measures the respondent's satisfaction to five family function measures (i.e., adaptation, partnership, growth, affection, and resolve) (Smilkstein et al., 1982) by applying it to measure family satisfaction among business-owning families. We use the FB-BRAG (Wiatt & Marshall, 2017), which is a combination of the family APGAR and work APGAR. The "FB-BRAG measures family business balance, resolve, adaptability, and growth" (Wiatt & Marshall, 2017, p. 1). The FB-BRAG categorizes businesses as highly functional, moderately functional, or dysfunctional. We consider that family-business functioning is inversely related to the probability of a business owner being a compulsive worker. Thus, we hypothesize that business owners with a highly functional FB-BRAG score are less likely to be compulsive in their work (H4).

Business Income

A study by Doerfler and Kammer (1986) among roughly 200 professionals found that workaholics may derive pleasure from the higher income usually associated with workaholism. Other workaholism models simply include income as a control variable when associated with a variety of workaholism measures (Aziz et al., 2015). A study among Norwegian journalists found that income differed among two subsets of workaholism, with work enthusiasts earning higher levels of income when compared to disenchanted workers (Burke & Matthiesen, 2004). Popular literature usually categorizes entrepreneurs as work enthusiasts; as indeed, the workaholism triad includes high work enjoyment.

Douglas and Morris (2006) posited that motivations vary among types of workaholics. For example, individuals who coveted material items were more invested in work due to their increased need for higher income. Hamermesh and Slemrod (2008) found that, among individuals 55 years of age or older, those with higher incomes were more likely to be workaholics and delay retirement. We contribute to this literature by studying association between the compulsion to work among small business owners and business income. We hypothesize that business owners who are classified as

compulsive owners will generate higher business income (H5).

Methods

Data and Sample

This study employed data from the 2019 Small Business Values Survey (SBVS). In the survey, small business owners in the United States were asked to respond to a series of questions on the topics of business and owner demographics, copreneurial activity, family-business functioning, work/family balance, and financial information (Marshall & Wiatt, 2019). The SBVS was conducted in April 2019.¹ The survey was built in Qualtrics and distributed through a third-party database company (Kantar, formally LightSpeed). The 20-min online survey was sent to business owners through Kantar.

The respondents were located using a proprietary database owned by LightSpeed Research (Kantar) for small business owners in the United States for a total of 953 respondents. To qualify for the survey, respondents had to own their business, regardless of if it was a family business or a non-family business. The Small Business Administration definition of *small business* was utilized, so that no businesses in this sample had over 500 employees. Minimum racial, ethnic, and gender quotas were required to have a generalizable sample of small businesses in the United States. Racial and ethnic minorities had to make up 20% of the sample and women 30% of the sample. The businesses sampled included non-employer business owners that tend to be more diverse in terms of gender (40%) and ethnicity (32%) than employer businesses where 30% are women-owned and 20% are ethnic minority owners (Small Business Administration, 2018).

From this sample of 953 respondents, the sample was reduced to 910 respondents because 43 businesses were uncooperative or abandoned the survey. From the cooperative sample of 910 businesses, 35 were not eligible because they were not business owners, leaving 875 qualified business owners. Two “attention check” questions were included in the survey to help enhance the quality of the collected data. The first attention check question dropped 312 respondents and the second attention check question dropped 52 respondents. The final sample consisted of 511 complete surveys.

The response rate was 58.4%; 511 completed surveys out of 875 qualified business owners. The response rate reported here is based on the number of completed surveys divided by the total number of people who started the survey, minus the number of uncooperative, abandoned, and ineligible cases.

Due to use of LightSpeed’s proprietary database, the total number of business owners in the sample and their rate of pay for survey completion is unknown. The objective of this study was to investigate how family, business, work traits, and owner variables interact to determine whether a business owner is a compulsive owner or a non-compulsive owner. After culling for non-responses, there were 483 usable observations for the current study.

Statistical Analyses

Cluster Analysis

Cluster analysis was used to place business owners into two groups, compulsive and non-compulsive, to further answer the question of “does compulsive working pay off?”. Cluster analysis creates K groups (as specified by the researcher) and places individual observations into those groups. The groups are created based on the variables chosen by the researcher and are constructed so that variation or sum of squared errors within each cluster is minimized (Columbia University Mailman School of Public Health, n.d.; Heng & House, 2018; Jayawarna et al., 2013). Through the cluster analysis, we classified business owners into two groups (compulsive and non-compulsive) and clustered them based on the extent to which: (1) family hinders the owner’s progress at work, (2) the owner’s work demands spill over into his or her family and hinder family time, and (3) business demands keep the owner from participating equally in household responsibilities and activities. The three compulsive worker behavior indicator questions scaled from zero to four, where zero was ‘not at all’ and four was ‘extremely’.

It is worth noting that the third cluster variable (household responsibilities and activities) could be easily confused with “household activities and tasks”, which could imply that spouses should split household responsibilities equally. However, household responsibilities can pertain to financial, emotional, and physical responsibilities of the household. Traditionally, women have specialized in household labor and men have specialized in market labor. This study is not seeking to measure the split of household activities and tasks. Instead, this study aims to measure whether female business owners were more or less likely to work compulsively than male business owners.

The binary variable that was created from the k-means cluster analysis was then re-classified so that “1” indicated compulsive owner and “0” indicated non-compulsive owner. Table 1 provides the variables and descriptive statistics used for the cluster analysis. The two groups were statically different based on all three workaholism behaviors. The non-compulsive group (n=235) was less likely (0.33 on a 5-point Likert-type scale) to state that family hindered progress at work compared to the compulsive group (n=245) (2.31 on

¹ Institutional Review Board #1903021874.

Table 1 Clusters based on compulsive owner behaviors

Cluster variables	Non-compulsive owner group (n=235)		Compulsive owner group (n=245)		T-test significance level
	Mean	Standard error	Mean	Standard error	
Family hinders progress at work	0.33	0.04	2.31	0.07	***
Work spills into family time	0.75	0.05	2.65	0.06	***
Business keeps owner from family demands	0.77	0.05	2.56	0.06	***

T-tests were performed on means of compulsive owner and non-compulsive owner groups. Significance of those tests are indicated by 1%, 5%, and 10% levels; respectively (***, **, and *)

a 5-point Likert-type scale). The non-compulsive group was also less likely to state that business demands spilled over into their family and hindered their family time or that business demands kept them from participating equally in household responsibilities and activities. These statistically significant differences provided adequate evidence that these were two distinct groups of business owners. The compulsive indicator was subsequently used as the dependent variable in the probit models to analyze the effects of female, number of children copreneur, family-business functioning, and control variables associated with being a compulsive worker.

Probit Regression Analysis

The probit regression model predicts who is more likely to be a compulsive business owner. By knowing which factors are associated with the likelihood that a business owner will work compulsively in conjunction with the knowledge of whether compulsive working increases business income, business owners can make informed decisions to balance business and personal time allocation. While this study aims to discover determinants of compulsive working among small business owners in the United States, causality cannot be inferred. However, correlations can be drawn from relationships observed in the models. The probit model consists of the independent variables of interest including gender (women owner), number of children in the household, copreneurship status, and family/business functioning along with control variables such as owner age, minority status, post-secondary education, number of hours worked weekly, and if the business is in the service or production industry. Table 2 provides the dependent and independent variables and their associated definitions included in probit regression and the Ordinary Least Squares (OLS) regression models. While other variables of interest are self-explanatory, family business functioning (FB-BRAG) is a scale developed by Wiatt and Marshall (2017) that consists of the following four, 5-point Likert-type, questions: are you (1) satisfied you can turn to people at home and work for

help when something is troubling you; (2) satisfied others in your family and business accept and support your ideas or thoughts; (3) satisfied with the way others in your family and business share time together; and (4) satisfied with the outcome when a decision has to be made in favor of what is best for the family versus the business.

Generally, a probit model takes the following form:

$$(1) \quad P(y = 1|x) = G(\beta_0 + \beta_1 x_1 + \dots + \beta_k x_k) = G(\beta_0 + x\beta),$$

where G is the linear probability function where $0 < G(x) < 1$ (Wooldridge, 2015)

Specifically, our compulsive owner probit model takes the following form:

$$(2) \quad P(\text{compulsive worker} = 1) = \beta_1 * \text{female} + \beta_2 * \text{number of children in the house} + \beta_3 * \text{copreneur} + \beta_4 * \text{FBBRAG} + \delta * \text{control variables} + \epsilon$$

OLS Regression Analysis

OLS regression analysis was used to examine whether compulsive owners have higher or lower business incomes than their non-compulsive counterparts. Business income was the dependent variable in the OLS regression analysis. Table 2 also displays the dependent and independent variables and their associated definitions included in the OLS model. The variable of interest in this model is being a compulsive owner. Note that to determine concavity or convexity that could exist in the owner age, both age and age squared terms were included in the OLS regression. Generally, the OLS regression model takes the following form:

$$(1) \quad y_i = \beta_0 + \beta_1 x_i + \mu_i \text{ where } \mu_i \text{ is the error term and } \{(x_i, y_i) : i = 1, \dots, n\}$$

Specifically, the OLS regression was utilized to predict business income. The model takes the following form:

Table 2 Variable measures

Variables	Definition of variables
Dependent variables	
Compulsive owner	1 if the business owner's compulsive behaviors cluster; 0 if the business owner's non-compulsive behaviors cluster
Business income	Annual business income reported in 2018
Cluster variables	
Family hinders progress at work	The extent to which the owner's family hinders progress at work, where 0 indicates a response of "not at all" and 4 indicates "extremely"
Work spills into family time	The extent to which the owner's work demands spill over into the family and hinder/prohibit family time, where 0 indicates a response of "not at all" and 4 indicates "extremely"
Business keeps owner from family demands	The extent to which the owner's business demands keep them from participating equally in household responsibilities and activities, where 0 indicates a response of "not at all" and 4 indicates "extremely"
Hypotheses variables	
Female owner	1 if owner is female; 0 if owner is male
Number of children	number of children living in the house under the age of 19 (continuous)
Copreneur	1 if the owner and his or her spouse are copreneurs; 0 if non-copreneur owner or not married
Family/business functioning	scale from 1 to 5 measuring family/business functioning, where 1 is highly dysfunctional and 5 is highly functional
Control variables	
Owner age	Owner age in 2019 (continuous)
Minority	1 if owner is non-white; 0 if owner is white
Post-secondary education	1 if owner attended post-secondary school; 0 otherwise
Hours worked (weekly)	Number of hours the owner spends working or on work-related activities in an average week (continuous)
Homebased business	1 if the business is operated mostly from the owner's home or residential property; 0 if otherwise
LLC, corporation or trust	1 if the business has a legal business structure of limited liability corporation, other corporation, or trust; 0 if the business is a sole proprietorship or a partnership
Business age	Continuous, business age in years
Employees	Continuous, number of full-time/part-time employees in the business
Service	1 if the business is part of the service industry; 0 otherwise
Production	1 if the business is part of the production industry, including agriculture, mining, construction, and manufacturing; 0 if otherwise
Rural	1 if the business is located in a rural area (rural area or town with less than 10,000 people); 0 otherwise

Author data

$$\begin{aligned}
 (2) \quad \ln(\text{business income}) = & \beta_0 + \beta_1 \text{compulsive worker} + \beta_2 \text{female} \\
 & + \beta_3 \text{copreneur} + \beta_4 \text{owner age} \\
 & + \beta_5 \text{owner age squared} + \beta_6 \text{minority} \\
 & + \beta_7 \text{postsecondary education} \\
 & + \beta_8 \text{numbers of hours worked} \\
 & + \beta_9 \text{homebased business} \\
 & + \beta_{10} \text{LLC, corporation, trust} \\
 & + \beta_{11} \text{business age} \\
 & + \beta_{12} \text{number of employees} \\
 & + \beta_{13} \text{service} + \beta_{14} \text{production} \\
 & + \beta_{15} \text{rural} + u
 \end{aligned}$$

Prior to estimating the OLS regression, multicollinearity was investigated between compulsive worker and number of hours worked. The variance inflation factor (VIF) was measured for the two variables, measuring their correlation to each other (Wooldridge, 2015). The variables that measure the number of hours worked and the compulsive owner both produced a VIF of one, which indicates that there is not a correlation present between independent variables in a regression model. The lowest possible VIF value is one, thus multicollinearity is not an issue in this model.

Table 3 Descriptive statistics for variables in Probit model and linear regression model

	Total sample (N = 480)		Non-compulsive owners (n = 235)		Compulsive owners (n = 245)		T-test
	Mean	Standard error	Mean	Standard error	Mean	Standard error	
Compulsive owner	0.51	0.02					
Hypothesis variables							
Business income	3,028,470	1,554,763	692,182	249,955	5,278,229	3,038,531	
Female owner	0.54	0.02	0.65	0.03	0.43	0.03	***
Number of children	1.18	0.09	0.82	0.08	1.53	0.16	
Copreneur	0.39	0.02	0.34	0.03	0.44	0.03	
Family/business functioning	3.92	0.04	3.98	0.05	3.85	0.05	**
Control variables							
Owner age	43.77	0.63	47.68	0.93	40.01	0.80	***
Minority	0.31	0.02	0.22	0.03	0.39	0.03	
Post-secondary education	0.84	0.02	0.82	0.03	0.85	0.02	
Hours worked (weekly)	43.55	0.72	42.03	1.02	45.00	1.00	
Homebased business	0.57	0.02	0.59	0.03	0.54	0.03	
LLC, corporation or trust	0.19	0.02	0.18	0.02	0.21	0.03	
Business age	13.28	0.55	13.60	0.81	12.98	0.73	
Employees	22.37	2.06	14.67	2.58	29.78	3.13	
Service	0.23	0.02	0.27	0.03	0.19	0.03	**
Production	0.22	0.02	0.22	0.03	0.22	0.03	
Rural	0.36	0.02	0.38	0.03	0.35	0.03	

T-tests were performed on means of compulsive owner and non-compulsive owner groups. Significance of those tests are indicated by 1%, 5%, and 10% levels; respectively (***, **, and *). Fields are left blank in the case that a t-test is not applicable

^aThe mean is the share of respondents with that attribute per category

Results

Cluster Analysis Results: Compulsive and Non-compulsive Owners

Table 3 contains the descriptive statistics for non-compulsive small business owners, compulsive business owners, and the total sample. Independent t-tests were conducted on the means of each variable for the non-compulsive and the compulsive groups; significance levels are reported in Table 3. Statistically significant differences were seen between the compulsive owner group and the non-compulsive owner group. Sixty-five percent of non-compulsive owners were women, while only 43% of compulsive owners were female. Compulsive owners averaged more children in the house, 1.53 children compared to 0.82 for non-compulsive owners. Copreneur status was not symmetrical for compulsive and non-compulsive owners (44% and 34%, respectively). Non-compulsive workers had slightly higher mean family business functioning scores than compulsive owners (3.98 and 3.85, respectively).

On average, the age of compulsive owners was roughly eight years lower than that of non-compulsive owners.

Also, roughly 39% of compulsive owners were racial or ethnic minority owners; only 22% of non-compulsive owners were minority owners. Compulsive owners, on average, had roughly 30 employees, while non-compulsive owners had roughly 15 employees. Further, only 19% of compulsive owners operated their businesses in the service industry, while 27% of non-compulsive owners were in service industry.

There were no significant differences between compulsive and non-compulsive, in terms of being homebased businesses, being an LLC/corporation/trust, being in the production industry, and rurality. Including both compulsive and non-compulsive owners, median business income was \$100,000, 25th percentile was \$300,000 and 75th percentile was \$385,000. Additionally, the mean number of employees was 22.69 and the median was six with a 25th percentile 1 employee and the 75th percentile 24 employees.

Probit Regression Results: Predicting Compulsive Owners

The dependent variable for the probit regression model measured whether the respondent was a compulsive owner (1) or not (0). The probit regression results for the

Table 4 Probit regression results for being a compulsive owner

Variables	Coefficient	Robust standard error	Marginal effects
Hypotheses variables			
Female owner (H1)	− 0.592***	0.128	− 0.232***
Number of children (H2)	0.105***	0.035	0.042***
Copreneur (H3)	0.229*	0.129	0.091*
Family/business functioning (H4)	− 0.207**	0.081	− 0.083**
Control variables			
Owner age	− 0.022***	0.005	− 0.009***
Minority	0.165	0.140	0.065
Post-secondary education	0.020	0.171	0.008
Hours worked (weekly)	0.008*	0.004	0.003*
Service	− 0.024	0.155	− 0.010
Production	− 0.279*	0.161	− 0.111*
Constant	1.565***	0.521	
Log pseudolikelihood	− 287.364		
Pseudo R-squared	0.1324		
Number of observations	478		

Significance of variables are indicated by 1%, 5%, and 10% levels; respectively (***, **, and *)

probability of being a compulsive owner are shown in Table 4. As stated previously, the working definition of a *compulsive owner* used in this study is based on the workaholism triad of work involvement, drive to work, and work enjoyment. In this study, we hypothesized that women are less likely than men to be compulsive business owners (H1). The probit results indicated that the coefficient associated with female owner was statistically significant and negative, suggesting that female owners were less likely than men to be a compulsive business owner. Thus, the result supports Hypothesis 1. We also hypothesized that owners with more children are more likely to be a compulsive business owners (H2). The coefficient associated with number of children at home was statistically significant and positive, indicating that as the number of children increased, business owners were more likely to be a compulsive business owner. Thus, Hypothesis 2 was supported.

We hypothesized that copreneur business owners are more likely than non-copreneur business owners to be a compulsive owner (H3). The probit results show that the coefficient associated with the copreneur variable was positive and statistically significant; thus, Hypothesis 3 was supported. Further, we hypothesized that family business functioning is inversely related to the likelihood of the business owner being a compulsive owner (H4). The probit results indicate that the coefficient associated with family business functioning was statistically significant and negative, suggesting that business owners with high family-business functioning were less likely to be a compulsive owner. Therefore, Hypothesis 4 was supported.

Table 4 also shows significant owner and business characteristics associated with the likelihood of being a compulsive owner. These variables include owner age, number of hours worked weekly, and whether or not the business is in the production industry. Specifically, owner age was statistically significant and negative, suggesting that older business owners were less likely to be compulsive owners. It was noted that the more hours owners worked per week, the more likely owners would be compulsive in their work. Further, business owners who operated their business in the production industry were less likely to be a compulsive owner as compared to owners who run their business in non-production industry.

OLS Regression Results: Do Compulsive Owners Make More?

In this study, the OLS regression model analyzed the effect of being a compulsive owner on business income. We hypothesized that compulsive owners would have higher business income than non-compulsive owners. Table 5 showed that the compulsive owner variable was not statistically significant, suggesting that compulsive owners did not make more business income than their non-compulsive counterparts, *ceteris paribus*. Thus, Hypothesis 5 was not supported, and it seems that being a compulsive owner does not pay off for business owner income.

Additionally, Table 5 indicated significant variables associated with business income among small businesses. As revealed in previous literature, female owners made less business income than male owners. Homebased businesses were also found to make less business income than

Table 5 Ordinary least squares regression results for business income

Variables	Coefficient	Robust standard error
Hypothesis variable		
Compulsive owner (H5)	- 0.276	0.221
Control variables		
Female owner	- 0.620***	0.243
Copreneur	0.051	0.215
Owner age	0.054	0.054
Owner age squared	- 0.001	0.001
Minority	- 0.230	0.238
Post-secondary education	0.012	0.287
Hours worked (weekly)	0.028***	0.007
Homebased business	- 1.107***	0.203
LLC, corporation or trust	0.093	0.264
Business age	0.019*	0.010
Employees	0.004	0.003
Service	- 0.628***	0.307
Production	- 0.230	0.307
Rural	- 0.680***	0.218
Constant	10.564***	1.364
R-squared	0.22	
Number of observations	477	

Significance of variables are indicated by 1%, 5%, and 10% levels, respectively (***, **, and *)

non-homebased businesses. Older businesses were found to have higher business income, suggesting that business age increased, business income also increased. Hours worked by the business owner was positively associated with business income.² Business in the service industry had less business income compared to wholesale businesses. We also found that rural businesses had less business income than urban or suburban businesses. However, minority status, the education of the owner, and age of the business owner were not statistically significant. Business characteristics that were also not statistically significant included the legal structure of the business, the number of employees, and operating the business in the production industry.

Discussion and Implications

Previous research has found that small business owners were likely to have fewer resources when compared to larger businesses and were less able to delegate (Akande, 1994). Thus,

² We tested whether hours worked was endogenous using an instrumental variables approach. The endogeneity test statistic p-value was 0.493; thus, hours worked was not endogenous.

it is plausible that small business owners would have a proclivity to become addicted to work (Smilor, 1997). Indeed, a compulsion to work is considered an entrepreneurial trait. This study aimed to investigate what business and owner characteristics are associated with the likelihood of small business owners to work compulsively. Then, this study further investigated whether compulsive owners have higher business incomes than non-compulsive owners.

Traditional gender roles dictate that women are the primary caregivers of the household and children. Women may not only experience a marriage tax in terms of lower income, but also may experience a lower tendency to be compulsive owners. Although there is no consensus on whether workaholism differs by gender, we found that women were less likely to be compulsive owners than men, which is consistent with the findings of Shimazu et al. (2011). Women may be less likely to be compulsive owners because they may choose self-employment in order to achieve more balance between work and family (Hundley, 2001; Young & Wallace, 2009). Further, one reason that women may be less likely to be compulsive owners than men may be that for women businesses owners, work-life balance depends on finding synergies between the family and business systems (Gherardi, 2015). In fact, Huang and Wang (2013) found a stronger relationship between work-family conflict and workaholism in men than in women.

This study found that small business owners with more children were more likely to be compulsive owners. Hypothesis 2 was supported as the larger the family, the more likely it is that the business owner is a compulsive owner. Previous research also found a positive association between family composition and a compulsion or absorption with work (Andreassen et al., 2013; Dumas & Perry-Smith, 2018). The findings of the current study imply that family demands may make small business owners feel that family hinders their progress at work and/or that business demands keep them from participating equally in the family.

Previous research has demonstrated that negative spillover between the work and family systems is positively correlated with the compulsion to work (Andreassen et al., 2013; Bakker et al., 2009, 2014). Shimazu et al. (2011) also found that workaholics had higher work-family conflict. Indeed, we found that small business owners with higher family-business functioning were less likely to be compulsive owners. Thus, Hypothesis 4 was supported. Our results concur with previous research by indicating that higher family-business functioning is associated with a decreasing probability that the business owner would be a compulsive owner (Andreassen et al., 2013; Bakker et al., 2014; Shimazu et al., 2011). The findings imply that high family-business functioning could result in positive spillover between the work and family systems.

Given that copreneurial owners work more hours per week and have a lack of boundaries between home and work (Baron & Lachenauer, 2015; Dreyer & Busch, 2022; Helmle et al., 2014; Rodrigues & Franco, 2021), we hypothesized that copreneurs would be more likely to be compulsive owners; this hypothesis was supported. Specifically, the copreneur variable was positive and statistically significant in predicting owners' compulsion to work. The findings imply that copreneurial owners are challenged with the intertwined life-domains in the context of the family business, which could influence a small business owner to being a compulsive owner. Future studies can continue to examine the association between copreneurship and owners' compulsion to work.

This study found that owner age is negatively associated with the likelihood of small business owners being compulsive, suggesting that older business owners were less likely to be compulsive owners as they aged. These findings support the literature. Particularly, as workaholism is an inherent drive to work, both excessively and compulsively (Bakker et al., 2014; Caesens et al., 2014; Gillet et al., 2017; Kravina et al., 2014), it is intuitive that older business owners may seek a more balanced and more rigid boundary between work and family. These older business owners may be able to place some boundaries due to management successors being present, business success over the years causing less of a need for the business owner to work compulsively (if monetary motivations are present), and the owner also becoming more cognizant of their own mortality.

A significant and positive association between hours worked per week and being a compulsive worker was found. As a business owner, individuals may feel as though working long hours, putting work before family, and sacrificing family for work are the only ways to achieve success. However, balancing between family and business systems is very important to work and family harmony as well as overall owner/employee health (Caesens et al., 2014; Gillet et al., 2017). Business owners can influence how much the business spills into employees' personal lives (Fisher et al., 2009). Moreover, business owners can have significant power to influence the balance that they achieve. This balance goes beyond hours worked. On average, compulsive owners only worked approximately three hours more per week than non-compulsive owners. Based on the probit results, even though hours worked per week was a statistically significant factor in being a compulsive owner, the marginal effect was negligible.

One of the main focuses in our study was to examine whether compulsive owners of small businesses have higher business incomes than their non-compulsive counterparts. The OLS results showed that compulsive owners did not earn more business income than non-compulsive owners.

This result conflicts with previous research by Burke and Matthiesen (2004), who found that business owners with more work enthusiasm were more likely to have higher income. The findings led us to conclude that owners' compulsion to work does not increase business income. In fact, even though the compulsive owner variable is not significant to business income, the sign of the coefficient is negative. Although working compulsively does not increase business income, number of hours worked does increase business income. Therefore, business owners should focus on working efficiently during their working hours.

Our findings imply that developing strategies or seeking solutions for balancing family and business demands are crucial for the sustainability of small family business in the long-term. Compulsive working is not correlated with higher income for owners. Furthermore, higher family/business functioning decreases the chance of a business owner being compulsive. It is important, therefore, for family business consultants or specialists to provide small business owners with educational programs or community-based workshops that focus on healthy balance between work and family. Through such programs, small business owners could learn adjustment skills or strategies that could help them prioritize work and family decisions and balance/properly integrate their business and family lives to achieve business success in terms of owner/family success and also business income.

As expected, businesses owned by men made more business income than those owned by women. We could say that women small business owners may earn less than their male counterparts because women are less likely to be compulsive owners or that women are involved with their traditional gender role responsibilities for family demand. However, given that there were no statistical differences in hours worked per week between the compulsive and non-compulsive groups, further investigation to examine successful predictors of business income among women-owned small businesses might be needed in future studies.

Homebased businesses in the study earned significantly less income than businesses operated away from the residential property of the owner. This result could be due to the size-limiting factor faced when operating a business from the owner's home or the fact that homebased businesses tend to be smaller. In an SBA study of homebased sole proprietorships, homebased business net income was roughly half of their counterparts who operated in a rented space (Small Business Administration, 2018).

Conclusion

Compulsive owners did in fact work slightly more hours per week than non-compulsive owners. However, that alone does not seem to make a significant impact on business

income. We presume that compulsive owners are more likely to have higher income because they may be more involved in their business, have a higher drive toward firm success, and higher work enjoyment (Burke & Matthiesen, 2004). Consequently, the same three workaholism triad traits that presumably lead to higher business income can be found in most entrepreneurship aptitude tests (and signal increased likelihood for entrepreneurial success). For example, the willingness to work long hours (drive) and a passion for your business (involvement and enjoyment) are important traits of successful entrepreneurs. Business owners should carefully consider their compulsion to work and reflect on what drives them to be compulsive, as these traits do not result in positive business outcomes (increased business income). Instead, business owners should be cognizant of family-business functioning and work efficiently in the hours that they allocate to their business.

Funding This study received no external funding.

Declarations

Conflict of interest We have no known conflict of interest to disclose.

Ethical Approval We obtained Institutional Review Board approval and informed consent prior to the collection of this data.

Consent to Participate All participants included in this study provided consent to participate.

Data Availability Data is not currently publicly available.

Consent for Publication The authors of this article consent to its publication in the *Journal of Family and Economic Issues*.

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