

Small Business Seasonality: Characteristics and Management

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Seasonal cycles of demand present major problems for management of small businesses. This research provides the first known empirical descriptive evidence on seasonality in U.S. small businesses. Frequency data were gathered from a survey of 73 small business owners. The study revealed information on the attributes of cyclical demand, including the length of seasonal phases and reported causal factors of the phases. Cost and revenue management actions small business owners employed to manage seasonality were identified by phase. Implications of the findings for both practice and future research are considered.

Small businesses face major problems related to annual cycles of demand. These cycles of seasonal fluctuations may lead to slow or lost sales, unpredictable business conditions, and cash flow problems which in turn are major obstacles for small business managers (Kaufman, 2012; National Federation of Independent Businesses, 2004). The swings in sales and business operations resulting from seasonality affect both small business profits and a region's employment situation (Koenig & Bischoff, 2005), with potential implications for small business viability.

Despite its importance for small business management practices, there is no empirical evidence on seasonality from a business management perspective that might provide guidance to small business managers and small business consultants who advise business owners. The little information that is known is derived from economic development and tourism studies (Baum & Hagen, 1999; Butler, 2001; Cuccia & Rizzo, 2011). Those studies address economic development policy and offer normative guidelines drawn from theory and qualitative anecdotal evidence (e.g., case studies), with little grounding in systematic empirical study.

At its most basic level, seasonality itself has been poorly defined with respect to small businesses. There is no evidence on the nature of the swings or phases in business activity for small U.S. businesses, such as timing and duration, and perceived causes. Likewise there is no empirical evidence on the nature of the cost and revenue management actions small business owners take to manage seasonality.

This paper addresses this gap in the small business literature by offering empirical evidence on the nature of and responses to seasonality in small businesses, gathered from a survey of seventy-three small business owners across a range of industries. Our results provide descriptive information on the timing and duration of the different phases of seasonality and small business owners' reported causes of seasonality. The results also reveal the frequency of cost and revenue management actions small business owners currently take to manage seasonality.

The data provided by this study will benefit both small business owners and small business consultants who offer guidance to business owners. The results offer a current empirically based portrayal of the nature of seasonality. In addition, they suggest directions for future research into the most effective cost and revenue management practices associated with seasonality.

In the next section of this paper, we review the limited relevant literature on seasonality and small business. This is followed by our methodology, results, and discussion including implications for both practitioners and scholarly research, and conclusions.

LITERATURE REVIEW

Seasonality of demand is the movements in a time series during a specific time of year (Koenig & Bischoff, 2005; Moore, 1989). Seasonality involves seasons within seasonality: the peak season, two shoulder seasons and the off-peak season (Kennedy & Deegan, 2001)¹. Businesses may have one or more busy phase during which they will incur a significant percentage of their total annual sales (Radas & Shugan, 1998). As noted in our introduction, the swings in sales and business operations inherent in seasonality may give rise to slow or lost sales, unpredictability of business conditions, and cash flow problems, affecting small business profits and a region's overall employment picture (Koenig & Bischoff, 2005; Spencer & Holecek, 2007).

Seasonality results from both natural and institutional causes (Allock, 1994; Becken, 2012; Cho, 2009; Hylleberg, 1992). These may include factors such as weather, timing of holidays, school vacations, and the tax year. Though it frequently is related, seasonality thus is not always tied to the seasons of the year found in nature (i.e., spring, summer, fall, and winter).

Businesses experience both direct and indirect effects from seasonality (Witt, Brooke & Buckley, 1991). Direct effects are the swings in sales that come from direct relatively predictable forces (e.g., a ski resort reliant on cold winter temperatures). Indirect effects are swings in sales of a focal business from the seasonality of other businesses (e.g., a supplier to the ski resort).

The primary management actions suggested to mitigate seasonality include increasing demand outside of the busy phase(s), market diversification, and pricing (Ashworth & Thomas, 1999; Cuccia & Rizzo, 2011). Increasing demand outside the busy phase can include strategies such as scheduling events to draw customers, increasing advertising, or running promotions. Market diversification might involve finding alternative uses for the business's capacity during the phases other than the busy phase. Examples include actions such as using a landscape truck (a summer activity) to plow snow (a winter activity) or attracting retirees to vacation during the slow phase. Pricing strategies frequently involve discounting during non-busy phases.

Additional strategies that affect revenue and might be employed by small businesses to manage seasonality are discussed in the revenue management literature (Kimes & Chase, 1998; Shields, 2006; Thompson, 2010). Revenue management is a practice that involves the management of demand and price in order to maximize sales revenues from capacity (Kimes & Chase, 1998; Thompson, 2010). In restaurant revenue management, restaurants change their procedures during periods of high demand from procedures used during periods of low demand (Kimes, Barrash, & Alexander, 1999; Thompson, 2010). These changes made between times of high business volume and low business volume include changes to prices, space, staffing, and business hours as well as scheduling events and promotions to draw customers (Shields, 2006). These kinds of strategies position a small business to adapt to and manage the cyclical changes in sales by taking actions to manage their revenue by expanding their capacity during the shoulder up and busy phases.

Semi-structured open-ended interviews conducted with 17 Small Business Development Center (SBDC) counselors about how their small business clients adapt to seasonality suggested additional strategies to manage both revenues and costs (Shields, 2010). Cost management is the action managers take to reduce costs while maintaining value for customers (Horngren, Datar & Rajan, 2012). These interviews

¹ To avoid confusion, the seasons within seasonality will be referred to hereafter as phases: the busy phase, the shoulder up phase, the shoulder down phase, and the slow phase.

generated themes such as the need to make changes to business operations and financing (e.g., borrowing, paying off, saving during off-peak times); knowing when, what, and how much to change inventory levels (i.e., increase or decrease purchasing) during the shoulder up and shoulder down phases; investing in marketing prior to the busy phase; and hiring or laying off employees during the shoulder up and shoulder down phases.

In the next section of the paper, the methodology employed for conducting the study is presented.

METHODS

A convenience sample of small businesses was generated by the SBDC in a northeastern state. The sample consisted of 507 small businesses which had been clients of the SBDC during the prior two years.

A mail questionnaire was used to collect data. Three timed mailings were used following the survey mailing methodology recommended by Dillman, Smyth, & Christian (2008). Respondents received a letter from the SBDC state director informing them that they would be receiving a survey in a few days. The survey was mailed several days later with two cover letters, one from the SBDC state director and one from the principal investigator. Two weeks later, replacement surveys were mailed to those respondents who had not replied to the initial survey mailing. One hundred four surveys were returned yielding a response rate of 20.5%, with 73 usable questionnaires.

Respondents' reported business types were retail (32%); arts, entertainment, and recreation (22%); wholesale (15%); restaurant (12%); agriculture, forestry, hunting, and fishing (9%); tourism-related (6%); lodging (4%). Average annual sales ranged from \$0 to \$49,000. The number of employees ranged from none (33%) to 20 or more employees (5%). Between these extremes, slightly more than a third (38%) of respondents had two to five employees, a fifth (15%) had six to ten employees, 6% had 11-15 employees, and 3% had 16-20 employees.

Measures and Analysis

A questionnaire instrument was developed to measure characteristics of the phases of seasonality and actions taken by small businesses to manage seasonality. Items for the questionnaire were based on the seasonality and revenue management literatures. In addition, the items were based on and incorporated information derived from semi-structured open-ended interviews with 17 SBDC counselors about how their small business clients adapt to seasonality (Shields, 2010).

Following the literature, seasonality was viewed from the perspective of four phases: Shoulder up, Busy, Shoulder down and Slow. The timing of the phases of seasonality during the calendar year was measured by asking respondents to mark check-off boxes, one for each month in the calendar year, during which their business experienced the Slow, Shoulder up, Busy, and Shoulder down phases of seasonality respectively. The duration of a phase was measured by summing the number of calendar year months selected.

The perceived causes of seasonality were measured by having respondents mark check off boxes each representing major factors drawn from the literature on seasonality. The respondents were allowed to check as many boxes as they thought applied. The literature suggested that certain actions or strategies are undertaken in specific phases. The frequency of these actions to manage seasonality was measured by seven-point Likert type scales anchored by "Never" and "Always". Finally, additional questions gathered demographic information, such as type of business. Data were analyzed using SPSS to produce frequencies and means. In the next section, results of the analysis are presented.

RESULTS

Results on the timing and duration of seasonal phases, reported causes of seasonal sales fluctuations, and actions taken to manage sales fluctuations within each phase are reported here.

TIMING OF PHASES

Table 1 presents each of the twelve calendar months across the four phases of seasonality (i.e., Shoulder up, Busy, Shoulder down and Slow), showing the percent of respondents who categorized a given month into a specific phase as they experience it in their business. The month most frequently categorized within each phase was, respectively: June (53.4%) in the Shoulder up Phase, August (63%) in the Busy Phase, October (31%) in the Shoulder down Phase, and February (54%) in the Slow Phase.

Table 1: *Percent of Respondents Indicating Months in a Phase*

PHASES OF SEASONALITY				
MONTH	SHOULDER UP	BUSY	SHOULDER DOWN	SLOW
January	5.5%	6.8%	29.6%	44.6%
February	6.8%	8.2%	15.5%	54.0%
March	8.2%	8.2%	12.7%	52.7%
April	23.3%	9.6%	8.5%	41.9%
May	39.7%	12.3%	7.0%	31.1%
June	53.4%	23.3%	11.3%	13.5%
July	30.1%	57.5%	14.1%	14.9%
August	26.0%	63.0%	4.2%	10.8%
September	21.9%	37.0%	25.4%	9.5%
October	17.8%	30.1%	31.0%	17.6%
November	20.5%	30.1%	25.4%	16.2%
December	13.7%	37.0%	21.4%	21.9%

Figures 1, 2, 3, and 4 provide detail on the timing of each phase of seasonality, graphically depicting the percent of respondents who categorized each calendar month into that phase.

Figure 1: *Timing of the Shoulder Up Phase, Percent of Responses by Month (N = 73)*

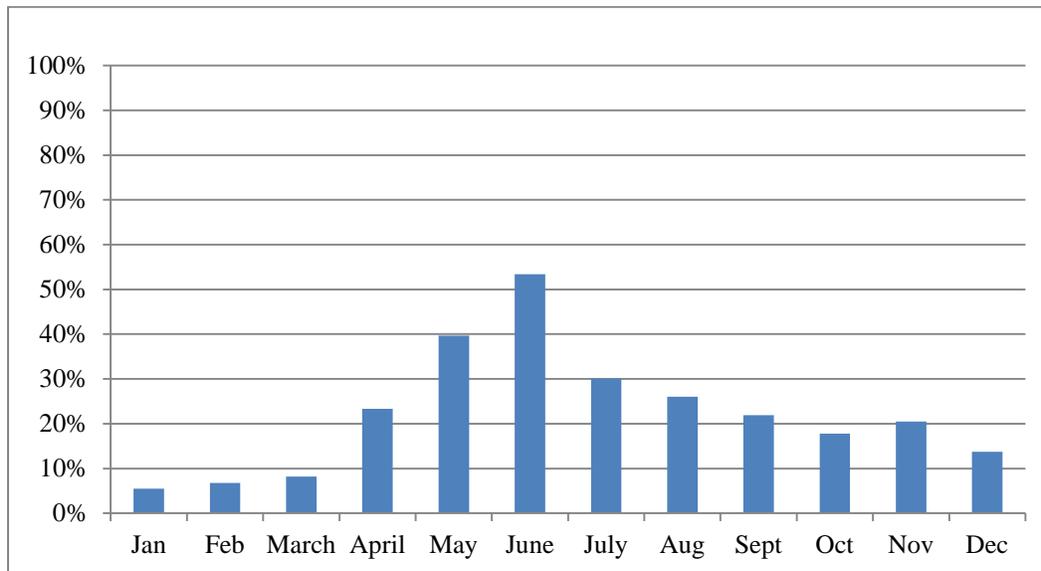


Figure 2: *Timing of the Busy Phase, Percent of Responses by Month (N = 73)*

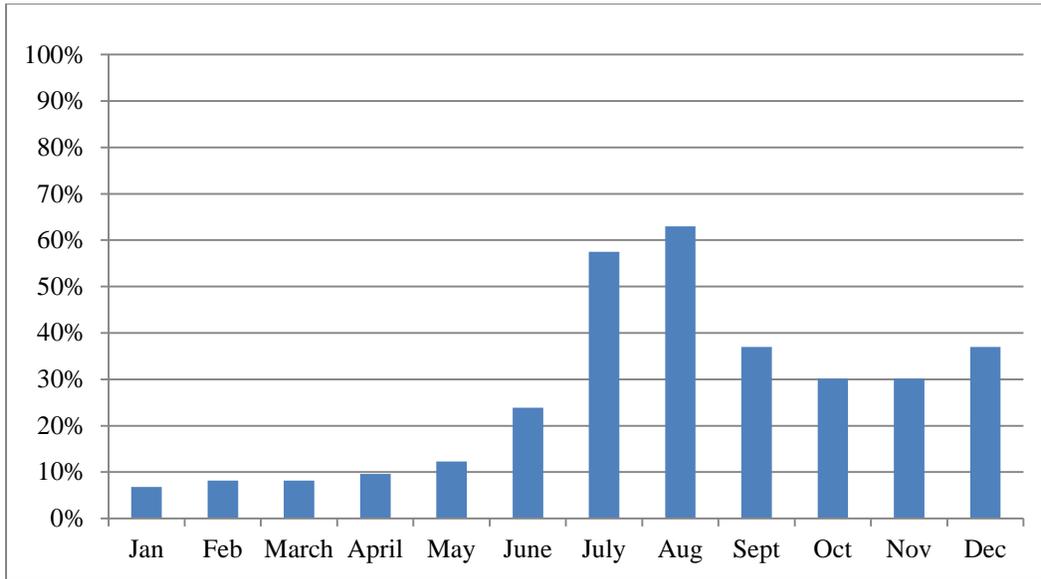


Figure 3: *Timing of the Shoulder Down Phase, Percent of Responses by Month (N = 73)*

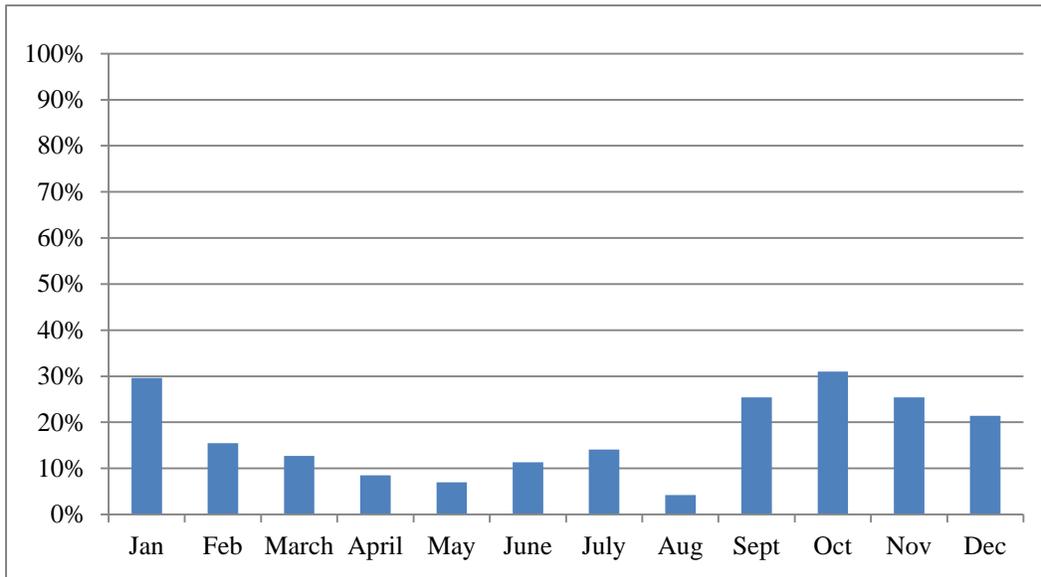
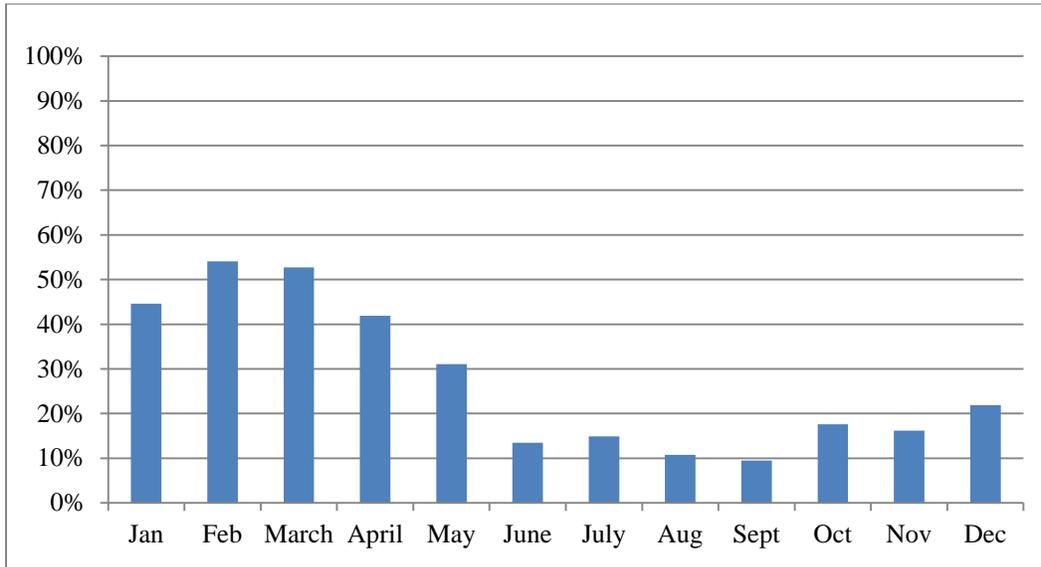


Figure 4: *Timing of the Slow Phase, Percent of Responses by Month (N = 73)*



DURATION OF PHASES

Table 2 shows the mean, range, and standard deviation of the duration of each phase of seasonality. The Slow Phase (mean = 3.29 months) and Busy Phase (mean = 3.23 months) lasted longest with the Shoulder up Phase (mean = 2.67 months) close behind. The shortest phase was the Shoulder down Phase (mean = 2.07 months). Among respondents, the phases ranged in length from 1 – 7 months (Slow Phase and Shoulder down Phase) to 1 – 10 months (Shoulder up Phase). The Busy Phase was 1 – 8 months in duration.

Table 2: *Duration of Seasonal Phases in Months*

	Mean	Range	Standard Deviation
Slow Phase	3.29	1 - 7	1.65
Shoulder up Phase	2.67	1 - 10	1.77
Busy Phase	3.23	1 - 8	1.78
Shoulder down Phase	2.07	1 - 7	1.11

Figures 5, 6, 7, and 8 provide detail on the duration of each phase of seasonality, graphically depicting the percent of respondents who indicated the number of months in each of the four seasonal phases.

Figure 5: *Shoulder Up Phase Duration*, Percent of Responses by the Number of Months (N = 73)

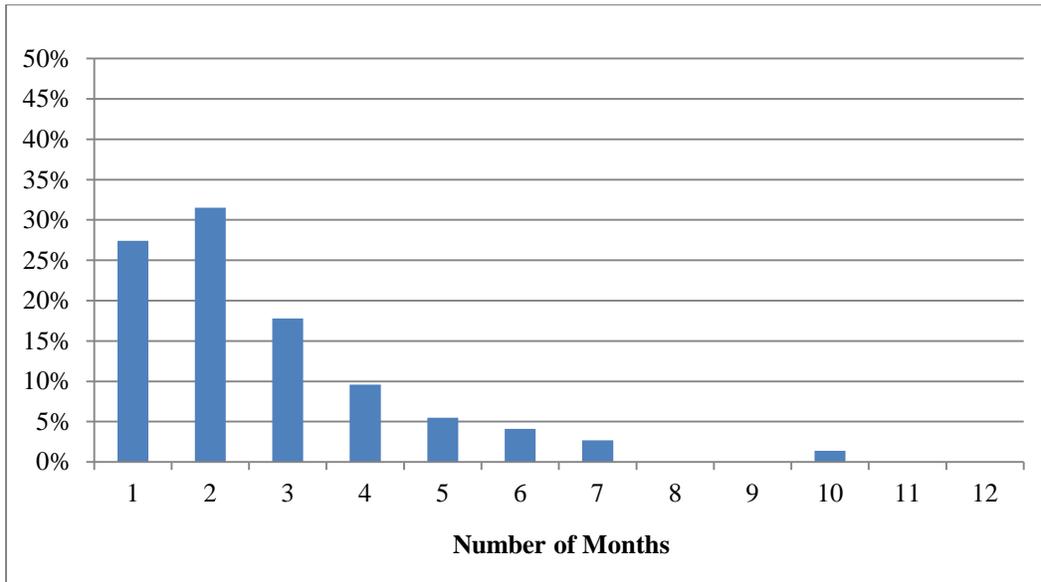


Figure 6: *Busy Phase Duration*, Percent of Responses by the Number of Months (N = 73)

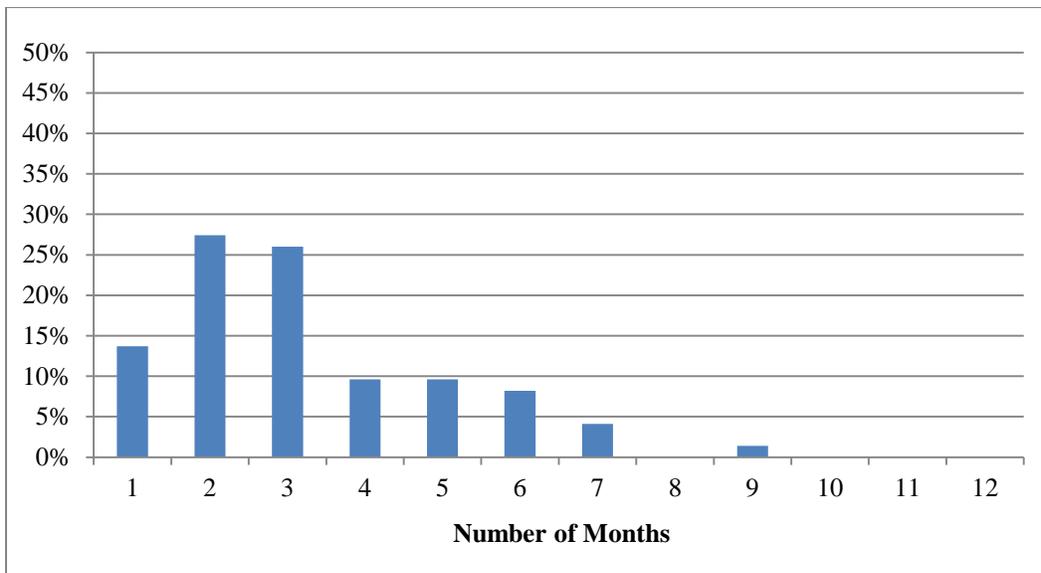


Figure 7: *Shoulder Down Phase Duration, Percent of Responses by the Number of Months (N = 73)*

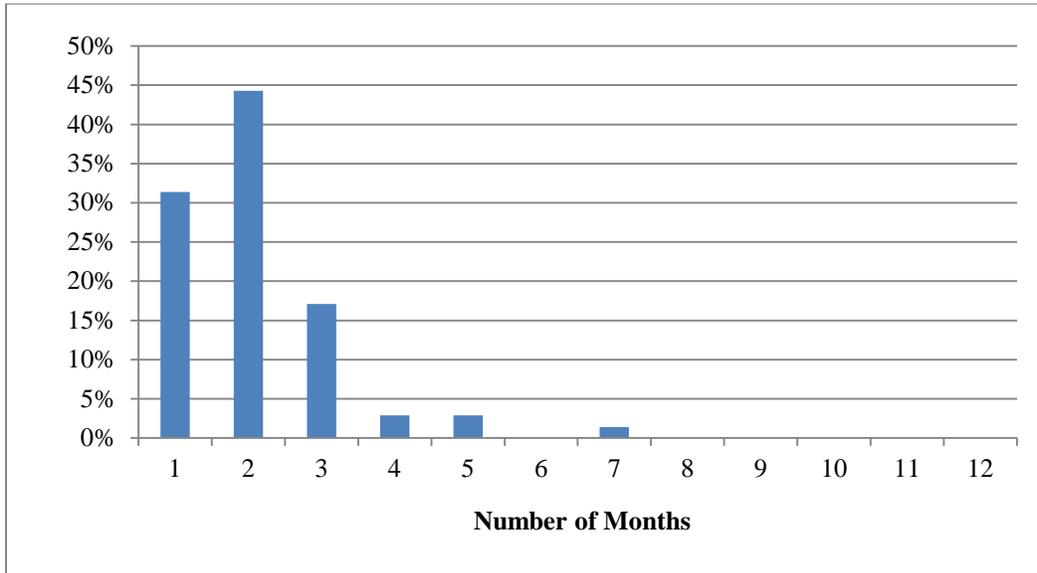
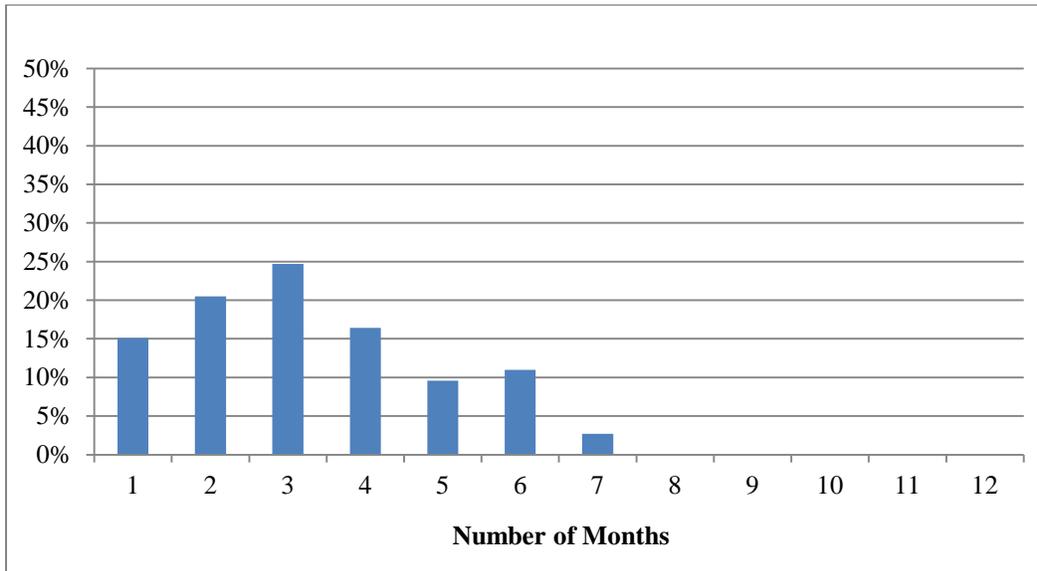


Figure 8: *Slow Phase Duration, Percent of Responses by the Number of Months (N = 73)*



REPORTED CAUSES OF SEASONALITY

The reported causes of uneven sales associated with seasonality across all phases were weather (29.59%), vacationing customers (25.44%), holiday weekends (18.93%), school year (12.43%), business-to-business sales (8.88%), and inventory availability (4.73%).

Timing and Frequency of Actions Taken to Manage Seasonality

Table 3 shows the mean frequency with which 27 specific actions were taken to manage seasonality, in descending order. These range from “Plan for next year” (mean = 5.96) to “Expand space” (mean = 1.90). The five most commonly employed strategies were “Plan for next year” (mean = 5.96), “Work on

business-related capabilities” (mean = 5.51), “Decrease inventory purchases” (mean = 5.40), “Increase inventory purchases” (mean = 5.38), and “Work on maintenance” (mean = 5.19). The five least commonly employed strategies were “Expand space” (mean = 1.90), “Close down” (mean = 2.21), “Increase prices” (mean = 2.49), “Discount” (mean = 2.66), “Hire additional employees” (mean = 3.12 in Shoulder up Phase and 3.28 in Busy Phase).

Table 3: *Mean Frequency of Actions to Manage Seasonality (N = 73)*

ACTION	MEAN
Plan for next year	5.96
Works on business-related capabilities	5.51
Decrease inventory purchases	5.40
Increase inventory purchases	5.38
Work on maintenance	5.19
Set aside money	5.06
Increase inventory purchases	4.48
Make efforts to extend the busy season	4.39
Try to retain critical employees	4.38
Decrease employee hours	4.14
Increase employee hours	3.95
Increase advertising	3.91
Run promotions	3.81
Discount	3.75
Decrease hours open	3.71
Owner takes a vacation	3.61
Decrease advertising	3.54
Increase hours open	3.48
Run promotions	3.45
Increase hours open	3.39
Lay off employees	3.33
Hire additional employees	3.28
Hire additional employees	3.12
Discounts	2.66
Increase prices	2.49
Closes down	2.21
Expand space	1.90

Table 4 provides additional detail on these strategies employed to manage seasonality, ranking them in descending order within their respective phases. The top most frequent actions taken within each of the four phases were, respectively: “Increase inventory purchases” (Shoulder up phase, mean = 5.38), “Set aside money” (Busy phase, mean = 5.06), “Decrease inventory purchases” (Shoulder down phase, mean = 5.40), and “Plan for next year” (Slow phase, mean = 5.96).

Table 4: *Ranking of the Actions to Manage Seasonality by Phase (N = 73)*

SHOULDER UP PHASE	MEAN	SHOULDER DOWN PHASE	MEAN
Increase inventory purchases	5.38	Decrease inventory purchases	5.40
Increase employee hours	3.95	Decrease employee hours	4.14
Increase advertising	3.91	Run promotions	3.81
Run promotions	3.45	Discount	3.75
Increase hours open	3.39	Decrease hours open	3.71
Hire additional employees	3.12	Decrease advertising	3.54
Discounts	2.66	Lay off employees	3.33
BUSY PHASE		SLOW PHASE	
Set aside money	5.06	Plan for next year	5.96
Increase purchases	4.48	Work on business capabilities	5.51
Make efforts to extend the busy season	4.39	Work on maintenance	5.19
Increase hours open	3.48	Try to retain critical employees	4.38
Hire additional employees	3.28	Owner takes a vacation	3.61
Increase prices	2.49	Closes down	2.21
Expand space	1.90		

DISCUSSION

The results of this study show that the phases of seasonality for the businesses sampled generally conform to the calendar year - with the Shoulder up Phase culminating in late spring, the Busy Phase peaking in summer, the Shoulder down Phase in the fall, and the Slow Phase in winter and early spring (see Figures 1-4). This predominant pattern was observed across these very small businesses, reflecting the meteorological year in a northern climate. Business size and type likely are factors that influence this observation. Although less than a tenth of respondents' businesses were categorized as tourism-related, the sales of small retail, arts-entertainment-recreation, wholesale, hospitality, and traditionally outdoor businesses like farming all can be impacted by weather and climate.

The observed pattern of seasonal phases also is consistent with the reported causes for fluctuations in sales. More than half the respondents (56.80%) indicated that causes were related to the three factors of vacationing customers, holiday weekends, and the school year. Viewed in combination, these factors all are related to availability of leisure time for customers. For most people, the summer months bring most leisure time. Nearly a third of businesses (29.59%) reported that weather was the cause of the unevenness in their sales. Not surprisingly, where these businesses are located, the best weather and most leisure coincide with the month of August, the month most frequently associated with the businesses' Busy Phase. These results with respect to the reported causes of seasonality are consistent with the causes of seasonality in the tourism literature (Allock, 1994; Becken, 2012; Cho, 2009; Hylleberg, 1992).

Although the data indicate that seasonal business phases appear to coincide with the calendar year, it is significant that most of the respondents do not close their businesses during the Slow Phase. Less than one-third of the respondents reported that they were closed during the months of January through April, the months most frequently noted as slowest.

The results provide the first known empirical data on the length of the phases of seasonality in U.S. small businesses. The phases vary in their average duration, consistent with the causal factors of weather and customer leisure time, leaving business owners with little time to react in some cases. The Shoulder up and Shoulder down phases are shorter than the Slow and Busy phases, i.e., the transition times between the highest and lowest points of the year are truncated. Business owners have a relatively short period of time to adjust to and manage the increase or decrease in sales. In addition, our examination of the range of phase durations revealed that nearly fifteen percent (13.7%) of the sample indicated that the Busy Phase – where most sales take place - lasts only one month of the year. These small business owners have a relatively short time span within which to generate sufficient revenues and profits to sustain them.

Strategies that the small business owners use to manage revenues and costs differ by seasonal phase (see Table 4). In the Shoulder up Phase, the three most frequently employed strategies (i.e., increasing inventory purchases, increasing employee hours, and increasing advertising) position the business to boost sales in ways that are consistent with the revenue management literature (Kimes & Chase, 1998; Shields, 2006; Thompson 2010). In the Busy Phase, the three most frequent actions taken are to set money aside, increase purchases and increase hours open. Two of these strategies (i.e., increasing purchases and hours open) are revenue management actions to make more sales in the midst of the busy season. The other action, setting money aside, supports findings from interviews with SBDC counselors regarding seasonality (Shields 2010).

In the Shoulder down Phase, the three most frequent actions are to decrease inventory purchases, decrease employee hours, and run promotions. Running promotions is a revenue management strategy that seeks to extend the higher level of sales experienced during the Busy Phase (Thompson, 2010). In contrast, decreasing inventory purchases and employee hours are cost management strategies put into place as the businesses' level of activity declines. Finally, in the Slow Phase, none of the three most frequently taken actions of planning for next year, working on business capabilities, and retaining critical employees is directly related to revenue management in the current season, unlike some of the strategies employed in the prior three phases. Neither are these actions cost management strategies. Instead, these actions indirectly address revenue generation for the next season's cycle of phases by ensuring readiness.

The least commonly employed strategies to manage seasonality include discounting during the Shoulder up Phase and raising prices during the Busy Phase. Both are standard revenue management strategies that appear to be underutilized.

IMPLICATIONS

The descriptive data from this study provide evidence on the nature of the phases of seasonality for policy makers, small business advisors, and small business practitioners. Policy makers can draw on the empirical evidence from this research to design programs that focus on the phases of seasonality alongside revenue management and cost management strategies that small business owners might employ during each phase. The evidence on duration and timing of the phases would help them to know when small business owners may most need assistance. In addition, incentives might be offered to motivate business owners to increase the frequency of actions they currently engage in that help them manage their costs and revenues within each phase.

Similarly, small business advisors may wish to create educational programs to emphasize the skills and concepts necessary to enable small business owners to more effectively implement cost and revenue management strategies that make the most of the opportunities and threats in each of the phases of seasonality. For example, training might cover different ways to increase sales during the Shoulder up

Phase through actions such as scheduling promotions and events or discounting prices. Such training should emphasize that planning is essential to make adjustments given the short durations of the phases (e.g., the Shoulder down phase). Educational programs should be scheduled during the Slow phase when small business owners have the time to complete them. Finally, when advising small business owners, counselors will want to consider whether the mix of revenue and cost management strategies is appropriate to both the business and the seasonal phase.

Findings of this study reveal that most of the small businesses surveyed stay open during the Slow Phase, with little action taken to boost sales during that time. Instead the focus is on retaining employees, planning, and preparing in other ways for the Busy Phase. This natural time to regroup may be an essential element of seasonality. Alternatively, the seemingly fallow time could suggest that additional strategies could be deployed to boost and extend the sales season, perhaps, in some cases, with e-commerce. Retaining critical employees was a strategy employed to manage seasonality during the Slow Phase. Although we did not collect information that might point to an altruistic philosophical basis for the practice, such as simply providing income for loyal workers, it may be that plays a role as well (Shields, 2010). In the event that there is neither a need nor clear philosophical basis and the shoulders of the season cannot be extended, some business owners might find it beneficial to manage costs by closing during the Slow Phase.

It is also of note that only a small portion of the total sample of small businesses categorized their business as directly tourism-related. Yet most experience seasons in accord with the meteorological year and customer leisure time. Are some of these businesses in fact tourism-related but not self-defined as such? The ways in which small business owners define their businesses may determine how they respond to and manage seasonal variations. An enhanced understanding of customers and customer segments is central to effective revenue management practices (Bell, 2012; Shields, 2006).

Results of this study offer small business owners a snapshot of actions currently taken by other small business owners to manage seasonality. It is up to the individual small business practitioner to give thought and to have discussions about the nature and frequency of actions reported by this research to examine what may or may not work in his or her own business.

CONCLUSION

This research contributes to the small business literature by providing the first known descriptive survey information on the nature of the swings in seasonality for small U.S. businesses. It is drawn from a sample of very small businesses in a northern climate. Results reveal that phases of seasonality follow the calendar year and vary in length. This is an apparent reflection of the impact of weather and customer leisure time that has real consequences for small businesses. These findings also bring to light the dramatically short time that some small businesses have available to generate significant revenues and to make adjustments to seasonal swings in demand. The frequency of cost and revenue management strategies undertaken by small businesses to manage seasonality shown by these results offers new insight to how small business owners address seasonal variations.

Future research might examine seasonality in other types of businesses, larger small businesses, or geographic regions. While this study did include a range of businesses, it was limited to very small businesses in one state in the northeastern U.S. where weather ranges from hot to cold throughout the calendar year. Additional insight would be gained by studying seasonality issues among small businesses in a place with a warmer year-round climate. The length of phases may be different in a southern climate. This difference might be associated with small business owners in those regions taking either more frequent or additional revenue and cost management strategies to manage the different phases of seasonality.

Subsequent research also might examine the cash flow and performance effects of cost and revenue management actions during the different phases of seasonality as well as variations in the duration of the phases of seasonality. In addition, a longitudinal study could measure the longer term effects of seasonality on small business survival and actions taken to manage the phases of seasonality.

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