

## SWOT analysis problems and solutions: Practitioners' feedback into the ongoing academic debate

Thomas King\*

*United States*

*Fortune 50 company in the retail industry in Minneapolis, MN*

*thomasaking22@gmail.com*

Shelly Freyn

*United States*

*Alfred University*

*freyn@alfred.edu*

Jason Morrison

*United States*

*Alfred University*

*morrisonj@alfred.edu*

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**ABSTRACT** The literature on SWOT is characterized by a debate among academics who have identified problems and proposed solutions for the strategic management tool, yet little research to date has captured practitioners' perspectives. Recent literature indicates that SWOT is still the most popular strategic management tool among competitive intelligence (CI) professionals. The purpose of this study is to bridge this academic-practitioner divide in the SWOT literature by conducting a cross-sectional survey that gathers practitioners' feedback regarding whether they are experiencing the problems or employing the solutions proposed by academia. A survey was distributed via LinkedIn to collect data from CI and other business professionals who conduct SWOT in the workforce. The findings confirm that practitioners experience select problems identified by the literature. Specifically, they may have too many factors per SWOT category, may be defining factors with ambiguous and unclear words, and may not have a means for resolving conflicts when factors fall in multiple categories (e.g., opportunity and threat). The findings also indicate that practitioners may not be consistently conducting SWOT as a structured business process, as proposed in the literature. The feedback provided by CI and other business professionals aids in closing the academic-practitioner divide by more clearly identifying persistent issues with SWOT and creating valuable and actionable insights that will drive the continual improvement of this popular strategic management tool.

**KEYWORDS:** academic-practitioner divide, strategic management tools, SWOT

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### 1. INTRODUCTION

The evolution of globalization and the ever-changing dynamics of digital

technologies continue to disrupt established industry business models. For business leaders navigating an exceedingly volatile environment, maintaining a sustainable

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\* *Corresponding author*

competitive advantage requires innovative organizational processes in strategic management. Specifically, these processes must deliver actionable intelligence on the macro-environmental forces driving disruption and reinforce an acute awareness of internal resources and capabilities. Empowered by these innovative processes, business leaders may be better equipped to develop strategies that ensure survival and success in an evolving industry landscape.

Academia has introduced an array of strategic management tools to support business leaders in the development of such strategies with SWOT (Strengths, Weakness, Opportunities, Threats) analysis being one of the prevalent fixtures in MBA programs. The pervasiveness of SWOT analysis has manifested in practice as this methodology is used by practitioners more often than any other strategic management tool (Frost, 2003; Qehaja, et al., 2017). This finding was further validated by a survey of CI professionals that confirmed SWOT as their primary strategy tool (Author & Hoffman, 2023). Furthermore, the number of articles published on SWOT in peer-review journals has continued to increase over six decades (Ghazinoory, et al., 2011; Gürel & Tat, 2017; Helms & Nixon, 2010), indicating a steadfast and growing interest in SWOT among academics. Yet, amidst its popularity in practice and in literature, there remains an ongoing debate surrounding the fundamental value of employing SWOT for strategy development.

At the core of the debate is SWOT's methodological process and whether it can provide any value for strategy development. On the one side, academics dismiss the utility of SWOT due to inherent problems with the methodology; on the other side, academics have proposed solutions designed to salvage valuable insights (Gürel & Tat, 2017). While academics from both schools of thought have weighed in, little research to date has considered the practitioners' perspective. Empirical research is lacking regarding practitioners' experiences with the alleged problems of the methodology or in what conditions SWOT is actually being used. The gap between proposed SWOT research by academia and lack of practitioner feedback epitomizes an

academic-practitioner divide. In order to bridge the divide, academics must elevate the level of managerial relevance by inviting the practitioners' perspective into the debate. According to Jaworski (2011), managerial relevance is the degree to which practitioners perceive academic research as supporting their work because the findings are important, actionable, and meaningful. The present research aims to elevate the managerial relevance regarding SWOT by addressing three key research questions:

- What are the fundamental problems with SWOT as identified in the literature and do practitioners experience these problems in practice?
- What are the best conditions for conducting SWOT as proposed in the literature and do practitioners conduct SWOT in these conditions?
- What are the current challenges that practitioners experience with SWOT and what can researchers learn from their feedback to improve the methodology?

Addressing these research questions will begin with a literature review that evaluates two bodies of literature in strategic management theory. The first comes from the resource-based view that serves as the foundation for assessing internal strengths and weaknesses. The second consists of the dynamic capabilities framework, which provides the foundation for identifying external opportunities and threats. From there, studies will be discussed that identify problems and propose ideal conditions for SWOT; thereby forming the hypotheses. The methodology section will discuss the survey development and distribution to practitioners, followed by a discussion of results, limitations, and future research opportunities.

## 2. LITERATURE REVIEW

A review of the literature provided insight into the origins of SWOT and how its comprehensive approach to strategy has helped it persevere for more than half a century. Although the earliest origins can be traced back to the 1950's and 1960's, Wehrich (1982) was the first to introduce SWOT as a

strategic management tool (Ghazinoory, et al., 2011). Wehrich originally proposed SWOT as a key part of the strategic planning process through which practitioners conducted an audit of internal resources (i.e., strengths and weaknesses), scanned for potentially disruptive factors in the macro-environment (i.e., opportunities and threats), and analyzed these variables in a matrix designed to facilitate strategy development. Decades later, SWOT is used more frequently than any other strategic management tool (Frost, 2003; Qehaja, et al., 2017) and remained uniquely capable of fulfilling a critical step in the strategic management process (Gürel & Tat, 2017). The unique capabilities of SWOT can be tied to its holistic approach to strategy, which by focusing on internal resources and external forces aligns with strategic theory from two parallel schools of thought: the resource-based view and the dynamics capabilities framework.

### **2.1. The resource-based view**

The resource-based view (RBV) looks explicitly at internal resources within the organization (Kraaijenbrink, et al., 2009). According to the RBV, the fundamental strategic imperative of an organization is to acquire and control those resources that are valuable, rare, imperfectly mobile, inimitable, and non-substitutable to achieve competitive advantage (Hunt & Derozier, 2004). By focusing the strategic planning process internally, the RBV aligns with the process of auditing internal resources (i.e., strengths and weaknesses) in SWOT.

Valentin (2001) was among the first academics to bring SWOT and the RBV school of thought together in the literature. According to Valentin, an RBV approach complemented SWOT by perceiving the organization as a collection of resources that operates in a larger environment with threats and opportunities. Clardy (2013) built on the work of Valentin by demonstrating how an RBV approach to SWOT presented three strategic actions: to invest to make strengths stronger, to take action to mitigate weaknesses, and to use strengths to capture opportunities. In this way, conducting SWOT from a RBV conceptualized the situational assessment so that an organization can employ internal resources (i.e., strengths and weaknesses) in response to external forces (i.e.,

opportunities and threats) in the environment to achieve a competitive advantage.

### **2.2. The dynamic capabilities framework**

The dynamic capabilities framework (DCF) addressed the process of scanning for potentially disruptive forces in the macro-environment (i.e., opportunities and threats). According to the framework, the fundamental strategic imperative of an organization was to identify the likely trajectory of technology and the market and to acquire the necessary resources to maintain or achieve competitive advantage (Kay, et al., 2018). Teece (2007) called for a function within the organization such as a CI team to look externally, recognize macro-environmental trends, then direct and redirect resources in the organization in response to these trends. By focusing the strategic planning process externally, the DCF aligned with the practice of scanning the macro-environment for potentially disruptive forces in a SWOT.

The DCF is among the latest iterations of external models for strategy, but has yet to be tied to SWOT in the literature. According to Kay et al., (2018), the DCF was based on previous external models like the Five Forces framework (Porter, 1980). DCF expanded Porter's research by demonstrating how scanning the macro-environment can present strategic choices like seizing opportunities, acquiring necessary resources, or reconfiguring assets to achieve competitiveness (Teece, 2007). With foundational skills in research, analysis, and communication, analysts on a CI team are well-positioned to serve in this capacity by scanning the macro-environment, analyzing key trends, and communicating findings to leadership who can then make informed decisions to maintain and achieve competitiveness (Author & Hoffman, 2003). Although not yet tied to SWOT, scanning the macro-environment with a dynamic capabilities function like a CI team aligns with the process of identifying disruptive forces (i.e., opportunities and threats) so that an organization can reconfigure or acquire resources (i.e., strengths and weaknesses) to achieve competitive advantage.

## 2.4. Problems with SWOT

In a meta-analysis of SWOT research, Ghazinoory et al., (2011) credited Hill and Westbrook (1997) for making important contributions to the methodological development by identifying a comprehensive list of problems. For this reason, the present research references Hill and Westbrook to test the issues practitioners may be

experiencing. In their seminal study (cited over 1,500 times), Hill and Westbrook reviewed the SWOT process at over 50 organizations and recognized seven problems that practitioners may experience when using the methodology. These problems identified by Hill and Westbrook were ultimately used to develop the hypotheses for the study (Table 1).

**Table 1.** Hypotheses drawn from problems with SWOT as identified by Hill and Westbrook (1997).

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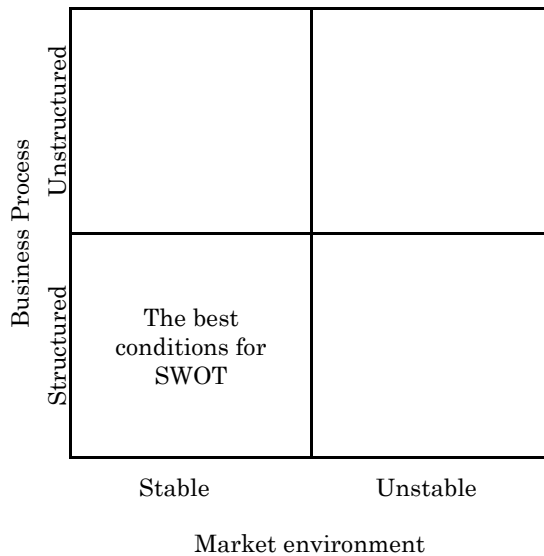
H1.	Practitioners are experiencing the problems identified by Hill and Westbrook (1997) while conducting SWOT.
H1 <sub>a</sub>	Practitioners do not verify factors with primary data.
H1 <sub>b</sub>	Practitioners do not verify factors with secondary data.
H1 <sub>c</sub>	Practitioners do not verify factors with analyses.
H1 <sub>d</sub>	Practitioners have no means of limiting the number of factors generated.
H1 <sub>e</sub>	Practitioners have no means of prioritizing factors.
H1 <sub>f</sub>	Practitioners are defining factors with unclear terms.
H1 <sub>g</sub>	Practitioners are defining factors with ambiguous terms.
H1 <sub>h</sub>	Practitioners have no means of resolving conflicts.
H1 <sub>i</sub>	Practitioners are experiencing a problem because there is no logical link to implementation.
H1 <sub>j</sub>	Practitioners are experiencing a problem because only a single level of analysis is required.

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The first problem identified was the lack of obligation to verify factors (i.e., strength, weakness, opportunity, or threat) with data or analyses; meaning practitioners may generate factors that are liable to subjectivity without analytic rigor. Hill and Westbrook (1997) also observed that there were no limits on the number of factors to be considered and no means of prioritizing factors in a SWOT. This can create confusion and reduce the degree to which factors are relevant to the organization. Other problems that could contribute to confusion included unclear or ambiguous definition of terms and no means of resolving conflicts such as during the placement of factors (e.g., whether a factor is a strength or weakness). Finally, Hill and Westbrook argued that there was no logical link to implementation and only a single level of analysis is required, resulting in practitioners squandering the valuable insights that SWOT can provide.

In addition, this study addressed the optimal conditions for conducting SWOT proposed in the literature. At the conclusion of the same meta-analysis, Ghazinoory, et al., (2011) considered the previously mentioned problems and offered a model for the best conditions to conduct SWOT. Specifically, Ghazinoory, et al., suggested that the best conditions for the analysis are within a structured business process and within a stable market environment. More broadly, these conditions can be described by a two-by-two matrix in which the degree of structure around the business process is defined along the Y-axis and the degree of stability in the market environment is defined along the X-axis (Figure 1).

## 2.5. Proposed conditions for conducting SWOT



**Figure 1.** Best conditions for conducting a SWOT, modified based on model by Ghazinoory, et. al., (2011).

Since these conditions were proposed in a meta-analysis and not empirically tested, this research aimed to test these conditions among practitioners for the first time. To test the extent to which a business process is structured, this study drew from empirical research in computer science that tested how well different modeling languages represent structured versus unstructured business processes (Cardoso, et al., 2016). In order to apply this research to SWOT, the present study tested the degree to which SWOT was predictable and repetitive among practitioners according to the four types of business processes defined by Cardoso, et al., and adapted from Reichert and Weber (2012). Specifically, this study sought to understand whether practitioners conducted SWOT by:

- 1) following the same steps sequentially every time,

- 2) following the same steps generally but may go back to a previous step or skip a step,
- 3) following the steps loosely and in no particular order, or
- 4) conducting SWOT with unique steps and in a unique order each time.

Another optimal condition put forth in Ghazinoory, et al., (2011) requires that SWOT be conducted in a stable market environment. In the financial literature, a stable economy and market are usually defined as “facilitating (rather than impeding) the performance of an economy” (Schinasi, 2004, p. 8). In the absence of macro-economic shocks like the coronavirus pandemic, there are typically four indicators of a stable market environment that facilitate the performance of the U.S. economy: low unemployment numbers, low inflation, high consumer activity, and high investor activity (Jareño & Negrut, 2016). In order to test the long-term trends of these economic indicators in absence of macro-economic shocks, this study used descriptive statistics to identify the median unemployment rate (U.S. Bureau of Labor Statistics), personal consumption expenditures and gross private domestic investment (U.S. Bureau of Economic Analysis), and inflation of consumer prices in the U.S. (World Bank) for the last decade for which data is publicly available, specifically between January 2011 and January 2021.

Based on a review of the literature, the following hypotheses were developed to test for the first time whether practitioners are conducting SWOT in the optimal conditions as proposed by Ghazinoory, et al., (Table 2).

**Table 2.** Hypotheses drawn from best conditions for conducting SWOT as proposed by Ghazinoory, et al., (2011).

H2.	Practitioners are conducting SWOT in the best conditions as proposed by Ghazinoory, et. al., (2011).
H2 <sub>a</sub>	Practitioners are conducting SWOT as a structured business process.
H2 <sub>b</sub>	Practitioners are conducting SWOT in a stable market environment.

### 3. METHODOLOGY

As one of the first empirical studies to gather practitioner feedback on SWOT, the problems identified and ideal conditions proposed in the literature served as the foundation of the survey. Questions were

developed using the guidelines of being relevant and meaningful, unambiguous, and easy to answer from the perspective of the participant (Connell, et al., 2018). A pre-test of the survey was conducted with business professors who had both taught SWOT as well as conducted SWOT as a practitioner.

Additionally, business and CI professionals who have conducted SWOT participated in the pre-test.

For valid inferences from survey data, respondents' characteristics must reflect the target population (Maholtra, 2019). To achieve this, a cross-sectional survey was distributed on LinkedIn using eleven groups whose title contained the term strategy or intelligence (e.g., Strategic Planning Society, The Strategic Management Society, Strategic and Competitive Intelligence Professionals). Professionals in the intelligence field were considered particularly relevant as they are highly focused on supporting executive level leaders in making more effective strategic decisions (Wheaton & Beerbower, 2006). To ensure respondents fit the sampling frame, the LinkedIn post requested practitioners to participate only if they had conducted SWOT at their organization.

Upon completion of the six-week collection period, the survey had a total of 41 participants and a 100% completion rate. Although limited, this does reflect the trend of declining response rates for organizational research (Fulton, 2016). Fulton argued that non-response is a growing issue and noted that "if there are no systematic differences between respondents and non-respondents, then the sample remains representative of the population and can provide valid inferences" (p. 4). Taking into account that respondents were both affiliated with strategic management organizations and conducted a SWOT at their organization, the sample size was deemed acceptable for this pilot study.

In the respondent pool, 40% identified as Executives and 33% as Managers, while Analysts reflected 28% of the group. Considering SWOT is a strategic

management tool and Managers and Executives accounted for almost two-thirds of the participants, the position levels were deemed well represented. There was a representative distribution of responses related to company size in terms of employees: Greater than 3,000 (39%), 1,000 – 2,999 (15%), 500 – 999 (5%), 201 – 499 (12%), Below 200 (29%). Gross annual revenue of the organizations represented among participants indicated nearly all were between \$1 billion - \$10 billion (89%), with the rest greater than \$10 billion. Overall, it was determined that there was representation from a variety of industries:

- Industrials 22%
- Information Technology 20%
- Professional Services 20%
- Financials 15%
- Health Care 12%

<10% (in order): Not for profit, Materials, Real Estate.

## 4. RESULTS

### 4.1. Problems with SWOT

Since Hill and Westbrook (1997) observed a lack of analytic rigor in how practitioners were generating factors for SWOT, practitioners were asked to rate on a Likert scale (5=always, 1=never) how often they generated factors by consulting data and conducting analyses. Findings revealed that all results were statistically significant to 0.1% and greater than neutral (3.0) which indicates that they often generate factors by consulting both secondary and primary data and by conducting analyses (Table 3). These findings contradict Hill and Westbrook's observation as practitioners do appear to be generating factors by conducting analyses and consulting primary and secondary data sources.

**Table 3.** Descriptive statistics for the methods used to generate factors for SWOT (N=41) and (df=40).

	<i>M</i>	<i>SD</i>	<i>t</i>	<i>Sig.</i>
Consulting secondary data	3.73	1.245	3.762	**
Conducting analyses	3.61	1.115	3.501	**
Consulting primary data	3.54	1.098	3.130	**

Note(s): M = mean; SD = standard deviation; n.s. = not significant; \* = p <0.05; \*\* = p <0.01; \*\*\* = p <0.001

Hill and Westbrook (1997) proposed that practitioners had no means of limiting the

number of factors generated for SWOT. Practitioners were asked to what extent they

typically have too many factors per category on a 5-point Likert scale (5=always, 1=never) and t-test results indicated that practitioners' ratings were greater than neutral (3.0), suggesting that practitioners may at times have too many factors per category. Practitioners were also asked to identify the typical number of factors generated per category in the model. Results indicated five to six (43%) was most common followed by three to four factors (40%), seven to eight (15%) and nine to ten (3%) factors. Despite most practitioners only having three to six factors per category, Likert results indicate practitioners rated that there were too many factors per category. As such, these findings are consistent with Hill and Westbrook and infer that there still appears

to be no means of limiting the number of factors generated.

According to Hill and Westbrook (1997), practitioners had no means of prioritizing factors. Results of the survey revealed that based on the 5-point Likert scale of agreement (5=strongly agree, 1=strongly disagree), responses were statistically significant to 0.1% and were greater than neutral (3.0). These results indicate that practitioners agree that they have some understanding of which factors are more important than others (Table 4). Since practitioners appear to have a means of prioritizing factors, the results contrast the findings by Hill and Westbrook.

**Table 4.** Descriptive statistics for the extent to which practitioners agree with the following (N=41) and (df=40).

	<i>M</i>	<i>SD</i>	<i>t</i>	<i>Sig.</i>
I typically have a clear understanding of which factors are more important than others	3.49	.898	3.479	**

Note(s): M = mean; SD = standard deviation; n.s. = not significant; \* = p <0.05; \*\* = p <0.01; \*\*\* = p <0.001

Considering Valentin (2001) had proposed in the RBV that certain types of resources could be more valuable to competitive advantage than others, practitioners were asked exploratory questions regarding which tangible and intangible resources were most important to SWOT on a 5-point Likert scale (5=very important, 1=not at all important). The results indicated that Informational ( $\mu=4.24$ ), Relational ( $\mu=4.10$ ), Reputational ( $\mu=3.73$ ), Human ( $\mu=3.63$ ), and Organizational ( $\mu=3.63$ ) resources were significantly greater than neutral (3.0) at

0.1% significance level, and Financial ( $\mu=3.46$ ) and Intellectual ( $\mu=3.34$ ) were significantly greater than neutral (3.0) at the .05% significance level (Table 5). The remaining categories of Legal and Physical resources failed to reach statistical significance, inferring both are considered to be of neutral importance. These exploratory findings suggest that a resource's ability to facilitate competitive advantage for the organization may be one approach current practitioners are using to prioritize factors.

**Table 5.** Descriptive statistics for the extent to which practitioners identify the following types of resources as important to a typical SWOT (N=41) and (df=40).

	<i>M</i>	<i>SD</i>	<i>t</i>	<i>Sig.</i>
Informational	4.24	.799	9.964	***
Relational	4.10	.735	9.561	***
Reputational	3.73	1.096	4.275	***
Human	3.63	1.090	3.726	***
Organizational	3.63	.942	4.309	***
Financial	3.46	1.247	2.380	*
Intellectual	3.34	1.063	2.056	*
Legal	3.02	1.235	0.123	n.s.
Physical	2.78	1.255	-1.120	n.s.

Note(s): M = mean; SD = standard deviation; n.s. = not significant; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

The problems of defining factors with ambiguous words or unclear words were also examined in this survey (Hill & Westbrook, 1997). Practitioners were asked on a 5-point Likert scale how frequently (5=always, 1=never) a factor is defined with ambiguous words and with unclear words, respectively. The results were insignificant or neutral (3.0) on the frequency at which they define factors with ambiguous words and unclear words, respectively. These results suggest that practitioners may at times be defining factors with ambiguous or unclear words, which aligns with the observations by Hill and Westbrook.

Another problem identified by Hill and Westbrook (1997) was that practitioners have no means of resolving conflicts when factors belong to multiple categories. Practitioners were asked how frequently a factor belongs to multiple categories in a typical SWOT on a 5-point Likert scale (5=always, 1=never) to determine whether such conflicts were being resolved. The results were insignificant or neutral (3.0) for the frequency at which a factor belongs to multiple categories, suggesting that practitioners may at times have factors that belong to multiple categories. Since practitioners are still experiencing this problem, the results are consistent with the observations of Hill and Westbrook (1997) and infer that practitioners may not have a

means of resolving conflicts when a factor does belong to multiple categories.

This study also examined the problem of whether practitioners had no logical link to implementation and whether practitioners only conducted a single level of analysis, as observed by Hill and Westbrook (1997). In order to test the link to implementation, practitioners were asked to rate on a 5-point Likert scale (5=always, 1=never) how frequently insights from SWOT were implemented directly into strategy development. Practitioners' responses were significantly greater than neutral at the 0.1% significance level, indicating that insights were frequently implemented directly into strategy development. In order to test whether practitioners conducted a single level of analysis, practitioners were asked to rate on a 5-point Likert scale how frequently (5=always, 1=never) insights from SWOT are combined with another analytic technique. The results were significantly greater than neutral at the 0.1% level, suggesting that practitioners are conducting more than one level of analysis. These findings contradict the observations of Hill and Westbrook (1997) because practitioners appear to be linking SWOT to strategy development and practitioners are combining SWOT with additional analytic techniques (Table 6).

**Table 6.** Descriptive statistics for the frequency at which practitioners self-report the following happens while conducting SWOT (N=41) and (df=40).

	<i>M</i>	<i>SD</i>	<i>t</i>	<i>Sig.</i>
Insights from SWOT are implemented directly into strategy development.	3.78	.936	5.341	***
Insights from a SWOT are typically combined with another analytic technique.	3.93	1.058	5.609	***

Note(s): M = mean; SD = standard deviation; n.s. = not significant; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

A follow-up exploratory question sought to reveal which of the analytic techniques identified by Ghazinoory, et al., (2011) practitioners used in combination with SWOT. The results showed that most practitioners combined SWOT insights with the following analytic techniques:

- Environmental 37%
- Balanced Scorecard Analysis 20%
- Statistical Analysis 20%
- Multiple Criteria Decision Matrix 15%
- Cross-impact Analysis 7%



<10% (in order): Cross-impact Analysis, Analytic Hierarchy Process, Porter's Five Forces, Porter's 4 Corners, Win/Loss Analysis, Salesforce/CRM Data, Scenario Analysis, and Keep, Stop, Start Analysis.

#### 4.2. Proposed conditions for SWOT

In addition to the proposed problems of SWOT, the survey examined whether practitioners are conducting SWOT in the best the conditions proposed in the literature. The first condition by Ghazinoory et al., (2011) was that SWOT should be conducted as a structured business process. When practitioners were asked on a 5-point Likert scale how frequently (5=always, 1=never) they conducted SWOT as a structured, step-by-step process, the responses were neutral (3.0) and failed to reach statistical significance. Based on the survey results, this infers that practitioners do not appear to be consistently conducting SWOT as a structured business process, contradicting Ghazinoory, et al.

The second condition proposed by Ghazinoory et al., (2011) was that SWOT

should be conducted in a stable market environment. According to the U.S. Bureau of Labor Statistics, the median monthly unemployment rate was 5.5%, which was determined to be low considering national average over the last 10 years is 5.7%. The median monthly personal consumption expenditures was \$12,432 billion and the median quarterly gross private domestic investment was \$3,206 billion, both of which were considered to be high based on national average over the last 10 years (U.S. Bureau of Economic Analysis). The median annual inflation of consumer prices in the U.S. was 1.8%, which was considered to be low compared to an average of 2.0% over the last decade (World Bank). Since the median value for unemployment and inflation were low and personal consumption expenditures and gross private domestic investment were high, these findings suggest that practitioners have been conducting SWOT in a stable market environment over the last decade as proposed by Ghazinoory, et al., (Table 7).

**Table 7.** Descriptive statistics for economic indicators between January 2011 and January 2021.

	M	SD
Unemployment Rate	5.5%	2.1%
Personal Consumption Expenditures	\$12,432B	\$1,306B
Gross Private Domestic Investment	\$3,206B	\$478B
Inflation, Consumer Prices in the U.S.	1.8%	1.2%

A complete summary of the hypotheses testing results is presented in Table 8.

**Table 8.** Hypothesis testing results.

H1.	Practitioners are experiencing the problems identified by Hill and Westbrook (1997) while conducting SWOT.	Partially supported
H1 <sub>a</sub>	Practitioners do not verify factors with primary data.	Not supported
H1 <sub>b</sub>	Practitioners do not verify factors with secondary data.	Not supported
H1 <sub>c</sub>	Practitioners do not verify factors with analyses.	Not supported
H1 <sub>d</sub>	Practitioners have no means of limiting the number of factors generated.	Supported
H1 <sub>e</sub>	Practitioners have no means of prioritizing factors.	Not supported
H1 <sub>f</sub>	Practitioners are defining factors with unclear terms.	Supported
H1 <sub>g</sub>	Practitioners are defining factors with ambiguous terms.	Supported
H1 <sub>h</sub>	Practitioners have no means of resolving conflicts.	Supported

H1 <sub>i</sub>	Practitioners are experiencing a problem because there is no logical link to implementation.	Not supported
H1 <sub>j</sub>	Practitioners are experiencing a problem because only a single level of analysis is required.	Not supported
H2.	Practitioners are conducting SWOT in the best conditions as proposed by Ghazinoory, et. al., (2011).	Partially supported
H2 <sub>a</sub>	Practitioners are conducting SWOT as a structured business process.	Not supported
H2 <sub>b</sub>	Practitioners are conducting SWOT in a stable market environment.	Supported

## 5. DISCUSSION

The present study drew upon the works of Hill and Westbrook (1997) and Ghazinoory, et al., (2011) to identify whether practitioners experienced problems with SWOT and conducted SWOT in the best conditions proposed in the literature, respectively.

The findings show that while practitioners resolved some of the problems with SWOT identified by Hill and Westbrook (1997), four issues persist today. The first problem is that practitioners indicated that they may have too many factors per category. The next two problems are that practitioners appear to be defining factors with ambiguous words and unclear words, respectively. Finally, the last problem is that practitioners may not have a means for resolving conflicts when factors could belong to multiple categories (e.g., opportunity and threat). This feedback more clearly identifies issues with SWOT from the practitioner perspective and provides valuable insight into improving the methodology.

Although the findings indicate that these issues with SWOT persist, exploratory findings offer a glimpse into how practitioners may be leveraging their industry expertise in an attempt to overcome these issues. For example, the practitioners indicated that Informational and Relational resources were particularly important for SWOT whereas Legal and Physical resources were not. These findings suggest that practitioners recognize the relative importance of different types of resources and may be limiting the number of strengths and weaknesses included in the SWOT to only the most important resources, especially considering that Industrials, Information Technology, and Professional Services were

the leading industries represented in the study.

In addition to these four problems, the findings also show that practitioners are not conducting SWOT in the optimal conditions as proposed by Ghazinoory et al., (2011). Specifically, the findings indicated that practitioners may not be consistently conducting SWOT as a structured business process. This feedback is particularly insightful and actionable for practitioners because establishing a more structured business process for SWOT is an optimal condition that is actually within the control of an organization's capabilities.

In contrast, while practitioners were conducting SWOT in a stable market environment over the last decade, the relative stability of the market environment is outside of the control of an organization. As such, the optimal conditions as proposed by Ghazinoory et al., (2011) reveals a void in that a more robust SWOT model may be needed for unstable market environments. Although beyond the scope of this study, exploratory findings suggest that practitioners may already be experimenting with new ways to build a more robust SWOT model. For example, the analytic technique used most frequently in combination with SWOT among practitioners today was Environmental Analysis which is focused exclusively on better understanding disruptions in the macro-environment and often falls under the responsibility of a CI function. Practitioners may be using Environmental Analysis to overcome this void with SWOT and as such, additional analytic techniques may offer a starting point in strengthening SWOT for more volatile macro-environments.

This study represents one of the first empirical studies to capture feedback directly from practitioners on how SWOT is conducted in the workforce today. The

findings identified the problem areas that still persist and the suboptimal condition that may be undermining the value of a SWOT. Collectively, these findings provide a roadmap for future research to develop a stronger and more robust SWOT methodology that better serves current practitioners.

## 6. CONCLUSION

The present study was a pilot test and represents one of the first attempts to empirically evaluate the SWOT process among current day practitioners. The results of the study help to close the academic-practitioner divide by identifying four ongoing issues with SWOT and revealing the suboptimal condition from the literature that still persist among practitioners.

A few limitations in the present study included potentially ambiguous questions related to SWOT, the relatively small sample size, and the limited sampling frame during survey collection. In order to mitigate these concerns, a pre-test for the survey instrument was conducted to identify and correct any issues with question ambiguity before beginning survey collection. Furthermore, filter questions and invitations to strategy and intelligence-specific LinkedIn groups were used to ensure a representative sample of the target population. Although the sampling frame is limited, the respondents in the sample reflect the target population of practitioners who have conducted SWOT in the workforce and as such provide invaluable insights.

Future research efforts could focus on establishing a clearer understanding of why some problems persist with such a long-standing strategic management tool and whether new solutions could help practitioners overcome these problems. For example, such research could explore the role business and intelligence programs play in training practitioners on SWOT and how that may impact the manifestation and persistence of these problems. Research could also explore whether conducting SWOT in collaboration with new technologies or additional strategic management tools could offer solutions for practitioners to overcome these issues.

Another opportunity for future research is to more clearly define the optimal conditions for conducting SWOT. This could prove highly relevant as practitioners conduct SWOT while navigating unique market dynamics or disruptive technologies (e.g., artificial intelligence) at any given time. For example, such research could explore whether practitioners agree that conducting SWOT as a structured, step-by-step business process is the best practice during more turbulent markets. Furthermore, research could explore opportunities for practitioners to incorporate other strategic management tools at various steps within the SWOT process to strengthen and build a more robust strategic management tool that can adapt to both stable and unstable macro-environments. The application and adaptation with other analytic techniques identified in this study may offer a starting point.

The practitioner feedback captured by this research provides a roadmap for future research to continue elevating the managerial relevance in the SWOT literature and closing the academic-practitioner divide on one of the most popular strategic management tools today. *The authors would like to acknowledge [MBA graduate assistant, university] for assisting with survey development.*

The authors of this paper hereby affirm that the submission has not been previously published and has not been submitted to or is not under review by another journal or under consideration for publication elsewhere, and, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright- holder.

The authors also affirm that there is no conflict of interest.

The anonymized research data will be made available if required and if the university ethics board permits.

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