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Adaptive leadership as a method to overcome organizational crisis: a Puerto Rican study

El liderazgo adaptativo como método para sobrellevar la crisis organizacional: un estudio en Puerto Rico

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Abstract: In a world that is constantly changing, organizational success is not guaranteed. This study explored how organizations pertaining to the food industry in Puerto Rico adapted to change and overcame the most recent events on the island, such as hurricanes Irma and María, the chain of tremors in January 2020, and the COVID-19 pandemic. After performing several in-depth interviews, findings show that four out of the five characteristics of adaptive leadership were present in at least 50% of the participating companies, which resulted in a successful adaptation. Differences within company sizes were found, and a profile of adaptive leadership in the context of Puerto Rico was developed.

Keywords: adaptive leadership, organizations, change, crisis management, success.

Resumen: En un mundo en constante cambio, el éxito organizacional no se puede garantizar. Este estudio exploró cómo las organizaciones pertenecientes a la industria de alimentos en Puerto Rico se adaptaron al cambio para superar los eventos más recientes en la isla, como los huracanes Irma y María, la cadena de temblores en enero de 2020 y la pandemia COVID-19. Luego de realizar varias entrevistas profundas, los resultados muestran que cuatro de las cinco características de liderazgo adaptativo estaban presentes en al menos el 50% de las empresas participantes, lo que resultó en una adaptación exitosa. Se encontraron diferencias según el tamaño de las empresas y se desarrolló un perfil de liderazgo adaptativo en el contexto de Puerto Rico.

Palabras clave: liderazgo adaptativo, organizaciones, cambio, manejo de crisis, éxito.

Introduction

After remarkable events such as hurricanes, earthquakes, and even a global pandemic, this study aims to understand how leaders of different organizations in the food industry in Puerto Rico continue to manage change to keep their businesses operating successfully. It focused on exploring the concepts of adaptive leadership and successful organizations and whether organizational size plays an essential role in adapting to change. The main goal was to develop a profile of adaptive leadership that will contribute to organizational change. Studying this topic is



very important because what we have taken as "normality" has been transformed by these events, and the production of scientific knowledge to guide us in this transformation is imminent. Focusing on the food industry in Puerto Rico, a qualitative approach consisting of eight indepth virtual interviews with organizational leaders was used. This way, an analysis based on company size and leader's profile was reached to determine which characteristics help impulse adaptive leadership and organizational change.

Literature Review

Heifetz et al. (2009) define adaptive leadership as "the practice of mobilizing people to tackle tough challenges and thrive." (p. 14). This concept emerged from evolutionary biology. It consists of three characteristics that constitute a successful adaptation: (a) preserve DNA for survival, (b) discard any DNA that does not serve the current need of the species, and (c) create arrangements that will allow the species to flourish in challenging environments. Therefore, the concept of adaptive leadership aims to find new ways to ensure growth amidst challenges and discard old methods and techniques that do not correlate with the present reality. This way, "successful adaptations enable a living system to take the best from its history into the future" (Heifetz et al., 2009, p. 14). However, according to their research, it is essential to differentiate technical and adaptive challenges and consider human, cultural, and political necessities.

Additionally, Cardona Madariaga (2016) states that adaptive challenges imply experimentation and require a learning process. He also points out that adaptive leadership is not about converging expectations but defying them and pushing individuals to their limits. Heifetz et al. (2009) would agree to this since they say that adaptive challenges cannot be solved by emitting orders or receiving expert advice. These challenges must be faced with new attitudes, competencies, and the coordination of the people involved. They emphasize that the capacity to overcome the situation relies solely on the person undergoing it. Accordingly, Corazzini & Anderson (2014) point out that "only the person facing the adaptive challenge can address this challenge." (p. 353).

Finally, Cardona Madariaga (2016) sums it up by stating that adaptive leadership proposes several changes to flourish. It is built by taking advantage of the past without disregarding it entirely and depends hugely on values and diversity.

Characteristics of Adaptive Leaders

Having understood the concept of adaptive leadership, it is now essential to understand the characteristics that distinguish adaptive leaders. Over time, there have been different characteristics that have been associated with leadership. For example, Bennis & Thomas (2002) identified four



critical elements: (a) engaging others in shared meaning, (b) having a distinctive and compelling voice, also, (c) having a sense of integrity, and lastly, (d) having adaptive capacity. This last characteristic is identified as the most critical skill needed to transcend adversity and emerge stronger. Even though these are not implicitly characteristics of adaptive leadership, it is essential to recognize that adapting always appears as a common factor when talking about leadership.

Reeves et al. (2011) identified four dimensions of adaptive leadership: navigating a new environment, leading with empathy, learning through self-correction, and creating win-win solutions. Regarding the first dimension, Reeves et al. stated that even though traditional models of leadership emphasize compliance, adaptive leadership styles lose their focus on hierarchy and make dissenting opinion compulsory. They also emphasized the importance of allowing leadership to be shared and to emerge from the given context. This consideration understands that no leader can lead through all circumstances and situations, no matter how good of a leader. Therefore, leadership should be assumed by the person more equipped to lead the particular case the organization faces.

The second dimension is leading with empathy, characterized by managing with influence and purpose rather than demand and control. This dimension consists of three considerations: seeing the world through the eyes of others, creating a shared sense of purpose, and rewarding accomplishment with autonomy. These considerations imply understanding different perspectives, identifying patterns, empowering employees, changing their mindset to attend to new realities, and motivating employees.

The third and fourth dimensions presented by Reeves et al. (2011) are learning through self-correction (which encourages change) and creating win-win solutions throughout five considerations. The first one is enabling individuals and teams to learn through experimentation, including embracing failure. The second; developing the organization's "signal advantage" to anticipate what is coming next. The third consideration is increasing agility for self-correction, followed by the fourth consideration of building platforms for collaboration, which technology can facilitate in more complex circumstances. Moreover, deploying leadership influence helps put soft skills into aligning interests.

The skillset of adaptive leadership is a bit more specific than most leadership definitions, mainly because it requires learning to attend every scenario, according to Heifetz et al. (2009). Like Bennis & Thomas (2002), other authors say that adaptive capacity is composed of two main characteristics: the ability to grasp context and hardiness. Grasping context puts several factors in perspective, while hardiness consists of persevering amidst devastating circumstances. Thus, while there are different perspectives and definitions, being able to endure challenges is a common factor for this type of leadership.



Characteristics of Successful Organizations

There are as many different types of leaders as there are organizations. Therefore, it is crucial to define what it means to be a successful organization to identify the main characteristics leaders should develop to guarantee organizational success. Salanova et al. (2016) approach this topic from the positive organizational psychology perspective. They state that to survive, organizations need to change their mindset and develop a positive organizational mechanism, making sure they are characterized by health and resilience. On the other hand, Amador Cruz (2020) defines successful organizations utilizing a tripartite rubric, which encompasses communication, willingness to contribute to actions or forces, and having a common purpose. These elements ensure that the organization is significant, meaning that it fulfills its purpose, and at the same time sustains organizational efficiency, which consists of making sure that the costs of meeting the organizational purpose do not exceed the benefits acquired by doing so. In contrast, Pfeffer (2016) identified that one successful practice is eliminating hierarchy levels and promoting selfmanaged teams, which can also imply putting the decisions in the hands of individuals who may be closer to relevant and necessary information.

Even though all the characteristics listed above define successful and efficient organizations, Heifetz et al. (2009) identified five adaptive organizations' practices. The first one is addressing the elephants in the room. If no issue is too sensitive not to be discussed, no questions are off-limits. Therefore, "hidden perspectives get put on the table fairly early" (Heifetz et al., 2009, p. 102). Secondly, there is shared responsibility towards the organization's future, where titles and role boundaries are transcended to create a shared sense of responsibility and accountability. Thus, everyone is committed to the organization's future and purpose, so there is a higher capability to adapt to any situation. Third of all, independent judgment is expected, which they explain that "this helps push decision making and idea generation down deep into the organization" (Heifetz et al., 2009, p. 104). They argue that an organization will not be able to identify and tackle adaptive challenges if they always expect the leader or CEO to have all the answers. Therefore, it is expected that every member of the organization will judge a situation independently before awaiting directions from their leaders. The fourth characteristic is developing leadership capacity, ensuring a healthy pipeline of leaders prepared to face adaptive organizational challenges. More than sending people to workshops, seminars, and training, there is a commitment to professionally develop those who have a long-term perspective and have the organizational future at stake. Finally, the last characteristic is that reflection and continuous learning are institutionalized since "adaptation requires learning new ways to interpret what goes on around you and new ways to carry out work" (Heifetz et al., 2009, p. 105). This continuous learning mindset is critical to interpreting what goes on around the organization and finally adapt.



Heifetz et al. (2009) indicate that this mindset is developed by ensuring that people who make mistakes are open to experimentation and not marginalized. They also stress considering the frontline worker's perspective in the decision-making process. When something terrible happens, the situation is addressed to debrief the lessons learned. Senior people are encouraged to use their sabbatical or leave absences to gain new perspectives, and communication and interaction are nurtured. Besides, executives encourage reflection and dynamic situations, while coaching for top positions is also encouraged. Lastly, strategic plans are not viewed as a sacred text but rather as a good guess.

A whole skill set is needed to ensure success in organizations, and they may vary according to different authors and perspectives. However, managing change and ensuring adaptive capacity always appear as a diverging point. We used Heifetz et al. (2009) perspective in this particular study as a conceptual framework.

The Importance of Adaptive Leadership and How It Drives Organizational Success

Heifetz et al. (2009) identified the importance of instigating adaptive leadership. They indicated that "fostering an adaptive culture will enable your organization and community to meet an ongoing series of adaptive challenges into the future, a future that is almost guaranteed in our day to keep pitching new challenges towards us" (p. 165). Therefore, they invite leaders to see themselves as a system. This way, they can analyze their personality, life experiences, skills, and much more details and combine them with the external situational insights to assess how suited they are to take on an adaptive challenge affecting the organization. They emphasize that "new environments and new dreams demand new strategies and abilities, as well as the leadership to mobilize them" (Heifetz et al., 2009, p. 2). That is why having adaptive capacity as a leader results in a very relevant skill. Also, it calls for a re-evaluation of strategies since past success will not guarantee future success, and therefore, new competencies should be developed, according to Cardona Madariaga (2016).

Puerto Rico has faced many challenges recently that have impacted the food industry and the economy. The events that stand out the most since 2017 have been hurricanes Irma and María in September 2017, the chain of tremors and earthquakes in January 2020, and the global pandemic impacting the island since March 2020. All of these events, and more, have shaped the way businesses in Puerto Rico operate and have called leaders to adapt to different situations to guarantee success.

Hurricanes Irma and María "have been the most damaging events that have affected our island in recent times" (Amador Cruz, 2020, p. 6). The main problem, Amador Cruz emphasized, is that they both were hurricanes of more major categories than hurricane George, and they struck Puerto Rico in the same month, thus affecting food exportations for the long term. Irma struck as a category five hurricane on September 6, 2017, while María struck two weeks later on September 20 as category



4 (Amador Cruz, 2020). However, since the trajectory of Irma headed north of Puerto Rico, in comparison to María, which directly made landfall on the island, the latter had more aggressive repercussions. It is crucial to consider the emotional charge of living in a zone prone to storms and hurricanes since this causes a collective hysteria when awaiting any natural event. This may result in long lines at supermarkets as a prevention mechanism and thus, the Food Industry must take a proactive and anticipative approach in order to attend to customers' necessities. In addition, employee absenteeism in the industry may arise since people can be fearful and cautious when awaiting these natural disasters and, therefore, supermarkets, restaurants, and distributors can all be affected.

More recently, in January 2020, a chain of tremors that started on January 6 with an earthquake of 6.4 magnitude kept individuals and organizations, specifically in the southwest area of Puerto Rico, in an uncertain situation. This event paralyzed everything in this area, especially the economy, as families and businesses were affected, and houses and buildings were devastated, according to Telemundo (January 13, 2020). This study addressed how the food industry was affected by this particular event.

Two months later, in March 2020, the coronavirus pandemic had started to affect the island, which has impacted individuals and organizations in Puerto Rico. There have been many adverse effects due to the governor's restrictions regarding the schedule and capacity restaurants can operate. However, the supermarket sector has been strengthened since the social distancing regulations limited individuals to eat out (Vélez, 2020). These events have made many think the food industry will emerge from the pandemic stronger than before (Garver, 2020). This study aimed to explore said effects and what procedures and policies that arose from the pandemic will prevail once it is over.

Methodology

The purpose of this study was to demonstrate how leaders with adaptive capacity can lead their organizations toward success even during challenging circumstances. This research aimed to develop an adaptive leader profile that will help transform organizations after remarkable events such as hurricanes, tremors, and even a global pandemic. Therefore, it was crucial to analyze what constitutes an adaptive leader and how those qualities help organizations persist amidst adversity. A qualitative methodology was adopted, defined as the data collection and analysis to refine the research questions or reveal by new ones throughout the research process (Hernández-Sampieri et al., 2014). This research focused on the food industry in Puerto Rico for various main reasons. The first one is because this industry is directly impacted by the events studied, such as hurricanes, tremors, and the pandemic since food supply is affected by said events. Secondly, this industry is also impacted by Law 75 of Puerto Rico: Law of Distribution Contracts of 1964 and the Cabotage Laws. For example, as of 2017, 85% of all the goods consumed in Puerto Rico



were imported and, as a result, Puerto Ricans ended up paying between 20% and 60% more for the goods imported from the mainland since the United States maritime flag is the most expensive in the world (Nina, 2016). This is due to the fact that the Merchant Maritime Act of 1920 or Cabotage Laws states that "all maritime transportation between the U.S. mainland and the island of P.R. would be conducted exclusively with vessels operating under the U.S. flag" (Nina, 2016, p. 60). This is particularly problematic when facing a crisis such as a hurricane since the island is left at the mercy of the United States imports and thus is more prone to food shortage.

Furthermore, it is one of the most critical industries since it attends to a primary need in human beings. Consequently, these companies must develop an adaptive capacity to surpass external challenges like the ones studied. Therefore, adopting a qualitative approach allowed an exploratory reach that considered the leader's perspectives. Originally, frontline employees were intended to participate in a survey regarding this topic to compare their experience to the experience of the executives. However, most participating organizations did not consent to their frontline employees participating. Thus, the results presented will only reflect the leader's perspective.

Participants

This study focused on leaders of the food industry in Puerto Rico. However, it had a quota sampling approach where a small industry sample voluntarily participated in the study. Eight in-depth virtual interviews were performed with executives of different companies of said industry. The participants belonged to two company sizes: (a) small & medium enterprises (SMEs) consisting of less than 250 employees and (b) large organizations consisting of more than 250 employees. It is important to clarify that the SMEs category was broken down into three categories, micro organizations consisting of 2-10 employees, small organizations from 11-50 employees, and medium organizations from 51-250 employees.

Four executives from SMEs and four from large companies were interviewed, and eight interviewees were achieved. These were scheduled by convenience and availability. All executives must have held a leadership position in their organization since January 2017. They also needed to be at least 21 years of age, Spanish proficient, and be employed in the food industry in Puerto Rico. The summary of the participants is presented in Table 1.



Table 1
Demographics of the Participating Organizations

Demographics of the Participating Organizations

Company	Number of employees	Category	Туре	Tenure of leader interviewed
1	5	SME - micro	food manufacturing	5 years
2	6	SME - micro	food retail	6 years
3	19	SME - small	restaurant	4 years
4	75+	SME - medium	restaurant chain	34 years
5	475	large	distributor	31 years
6	520+	large	distributor	30 years
7	530+	large	distributor	24 years
8	1,000+	large	supermarket chain	12 years

Note. SME stands for small and medium-sized enterprises.

Demographics of the Participating Organizations
Note SME stands for small and medium-sized enterprises.

Research Instruments

This study required one instrument for the in-depth interviews. A questionnaire published by Heifetz et al. (2009), which consists of a Likert scale to evaluate organizational leaders' adaptive characteristics, was used to guide the interview questions. However, additional questions were added according to this study's particular demands to understand the adaptation process, specifically after hurricanes Irma and María, the chains of tremors in January 2020, and the global COVID-19 pandemic.

Research Procedure

The research proponent abided by the requirements proposed by the Institutional Review Board of the University of Puerto Rico, Río Piedras Campus: CIPSHI. Once the approval to conduct the study was obtained, the research procedure began inviting organizational leaders to participate in the study, which was done through phone, email, Facebook, and direct invitation, ensuring the participation requirements were met. After the eight leaders had been identified, each interview was performed individually and scheduled based on the participants and the interviewer's availability. Every participation was voluntary, and participants were presented with a document of informed consent that they had to agree with before their interview took place. This informed consent explained the risks and benefits of taking part in the study and emphasized that they could withdraw their participation at any time. Additionally, it stated that the leaders' identity and the organization they represent would remain anonymous once the data were collected.

Having gathered all the data, a content analysis was performed. The goal of the analysis was to identify which adaptive characteristics



were predominantly present among the food industry leaders in Puerto Rico. It also focused on finding possible associations between specific characteristics and company size and its leaders' and employees' profiles.

The data was organized in tables that compared both organizational sizes in terms of the characteristics of successful organizations that were present in the adaptation process, other topics that helped in the said process, and the challenges presented to overcome adversity. The differences in distribution shown in these tables helped draw the study's concluding remarks.

Results

The study aimed to identify which of the characteristics of successful organizations proposed by Heifetz et al. (2009) were present in the participating organizations in the context of January 2017 up until March 2021. The content analysis results are summarized in Table 2. The first column corresponds to the five characteristics of successful organizations discussed in the literature. Columns two and three compare the frequency within the two company sizes; column number two refers to the four (N=4) small and medium enterprises, and column three alludes to the four (N=4) large companies. In the last column, the total of each characteristic among the eight participating organizations can be observed.

 Table 2

 Distribution of Successful Organizations Characteristics Present in Participating Organizations

Distribution of Successful Organizations Characteristics Present in Participating Organizations

Characteristics	Total among SMEs (N=4)	Total among large companies (N=4)	Total among all organizations (N=8)
Addressing elephants in the room	1	2	3
Shared responsibility towards the organization's future	4	3	7
Independent judgment is expected	4	0	4
Leadership capacity is developed	2	4	6
Reflection and continuous learning are institutionalized	4	4	8

Distribution of Successful Organizations Characteristics Present in Participating Organizations

It can be observed that the least frequent characteristic was *Addressing elephants in the room,* which shows the difficulty in having tough conversations and asking hard questions as a way to guarantee organizational growth. *Shared responsibility toward the organization's future* was widespread, especially among SMEs (./.). This refers to when employees engage in the organization's future and take matters into their



own hands. Even though it was present in almost every organization (%), it was more present in SMEs. This could be due to the closeness within members of the organization and how the repercussions of every individual's actions are more tangible than in larger organizations. The characteristic *Independent judgment is expected* was present in all (./.) SMEs but was missing (./.) in large companies. This refers to not waiting for the leader's instructions or expecting them to have all the answers but rather being able to think critically and act according to what they believe best responds to the present situation. The drastic difference found regarding this particular characteristic raises many questions that could drive new research topics, for example, the role of bureaucratic leadership in large organizations, the pros and cons of having a clear organizational structure, the advantages of autonomy in SMEs, and many more. Also, regarding the characteristic Independent judgment is expected, one of the leaders mentioned that they promote creativity within their employees since they consider it beneficial for the organization's innovation. The characteristic Leadership capacity is developed alludes to a commitment to employee's development in order for them to help make the changes needed to keep developing the organization. For this particular study, this characteristic predominated in large organizations (4/4) compared to SMEs (2/4), which could be a matter of access to resources and a desire to guarantee succession plans. Thus, it could be inferred that the larger the company size, the larger the capability to develop leadership for this sample. Lastly, the most frequent characteristic (8/8) was Reflection and continuous learning are institutionalized, which probably points to the ability to learn from adversity and external situations, specifically after these particular events. This way, every organization maintains openness and commitment to learning since their reality has been continuously changing and thus, challenging them.

Alongside the five characteristics of successful organizations suggested by Heifetz et al. (2009), additional characteristics manifested in the adaptation process in the participating organizations, which are summarized in Table 3. This table is organized in the same way as Table 2; however, the first column refers to new topics that arose from the content analysis of the interviews. Therefore, these topics are added to those presented in the literature.



Table 3
Distribution of Additional Topics That Contributed to A Successful Adaptation in Organizations

Distribution of Additional Topics That Contributed to A Successful Adaptation in Organizations

Topic	Total among SMEs (N=4)	Total among large companies (N=4)	Total among all organizations (N=8)
Adapting to change	4	3	7
Crisis Management Procedures and Policies	3	3	6
Flexibility	3	2	5
Fast decision making	3	1	4
Leading by example	3	1	4
Constant communication	3	1	4
Training and Development	2	1	3
Market Study and Analysis	2	1	3
Recognition and Bonding	1	1	2
Initiatives to increase motivation	0	1	1

Distribution of Additional Topics That Contributed to A Successful Adaptation in Organizations

The most remarkable finding in this table is that *Adapting to change* was the most frequent characteristic among organizations, especially among SMEs (4/4). Also, Crisis management procedures and policies was a persistent characteristic (6/8) and referred to the way leaders institutionalized the procedures used to overcome these situations. Additionally, *Flexibility* was one of the predominant characteristics that helped organizations adopt new ways of performing daily tasks. Some examples include adopting the telework modality during the COVID-19 pandemic and new services implemented, such as the curbside pickup. As shown in the table, Fast decision making, Leading by example, and Constant communication were present in half of the participating organizations. Fast decision-making accounts for the numerous 'on-thespot' decisions leaders had to make to attend these unplanned events. For example, a tremor is very unpredictable, and the pandemic was not expected. In this case, the hurricanes were the events with the most time to prepare. However, the aftermath still required making many fast decisions to continue operating during unusual circumstances. Leading by example refers to when leaders are not an exception to the rule; instead, they live and model the changes and policies implemented in organizations. One of the leaders expressed: "We live the changes and the policies, there are no exceptions" (P5). Leaders can model the behavior expected by employees, and it helps employees achieve said behaviors as they find coherence between expectations and the behavior modeled.

Lastly, Constant communication made employees feel secure amidst these times of change and uncertainty. Other characteristics present with less frequency contributed to a successful adaptation in these companies. These were: Training and development (3/8), Market study analysis (3/8), Recognition and bonding (2/8), and Initiatives to increase



motivation (1/8). One example of *Training and development* consisted of one company that gave a First Aid workshop after the natural disasters mentioned in this study. These activities show how priorities shifted, and the organizational objectives were adapted to attend to new situations. The events invited organizations to analyze their products and services to adjust to the current context and implement strategies to help motivate and recognize employees for their work during these complicated scenarios. All the initiatives mentioned above helped the participating organizations maintain afloat in a continuously changing environment.

Even though all these characteristics and initiatives helped organizations thrive, some challenges were presented in the process. These are listed in Table 4.

Table 4

Challenges Presented by Organizations in the Adaptation Process

Challenges Presented by Organizations in the Adaptation Process

Challenge	Total among SMEs (N=4)	Total among large companies (N=4)	Total among all organizations (N=8)
Human Resource Management	2	3	5
Puerto Rico's geography	2	3	5
Decreasing market	1	2	3
Customer's preferences	2	1	3
Laws and economy in Puerto Rico	1	1	2
Bureaucracy and Organizational Structure	0	2	2
Work-life balance	2	0	2
New investments	2	0	2
Use of technology	0	1	1

Challenges Presented by Organizations in the Adaptation Process

Leaders' most challenging aspects were Human Resource Management and Puerto Rico's geography. Regarding Human Resource Management, they mentioned generational differences, reorganization of employees, and changes in the organizational chart; they also recognized how difficult it was to maintain their employee's trust during these uncertain times. In addition, they struggled to attend to their different realities in these particular crises regarding mental and physical health and how they were affected by the hurricanes, tremors, and the pandemic. Lastly, specifically during the COVID-19 pandemic, even when some employees could adapt and perform their tasks remotely, the job of some frontline employees could not be done from a distance since it required working with machinery or attending to customers in person, for example.

Regarding Puerto Rico's geography, agriculture was directly impacted by the hurricanes and our dependence on imports put us at risk during these uncertain circumstances. Considering that Puerto Rico is an island,



if the agriculture is devastated and the imports are delayed, the food inventory will be affected, as one of the participants highlighted: "There were also no boats arriving at the dock, and this is all a food chain, and here the agriculture fell completely" (P4).

Other challenges presented were the *Decreasing market* and *Customer's* preferences which obligated organizations to create new products and find new ways to market them in order to survive. In addition, the Laws and economy in Puerto Rico played a challenging role in the adaptation process because organizations were already vulnerable when they had to face these three events. Therefore, inventory tax, Distribution Contract Laws, and the Cabotage Laws impacted the way organizations could reinvent their strategies since, as mentioned earlier, these laws place Puerto Rico under the mercy of the U.S. since there is an exclusivity agreement in terms of imports and they also cannot store a large inventory since the larger the inventory, the larger the taxes to be paid. Also, large companies faced a particular challenge regarding Bureaucracy and Organizational Structure. Leaders expressed how their bureaucratic structure limited the individual control over situations. This structure affected the adaptation process since individuals rely on their leader's directions, and thus, they cannot act independently when needed.

On the other hand, SMEs faced different challenges. The leaders of the two smallest companies reported a lack of work-life balance due to having to undertake the responsibilities of an organization during uncertain circumstances, with a small team and limited resources. Another challenge SMEs faced was incurring in *new investments*. For example, with the hurricanes and tremors, they had to invest in generators (which large companies mostly already had) and, during the pandemic, "we had to invest in a temperature measurement and sanitation system, train employees, do more rigorous cleaning, and invest in signage" (P4).

Lastly, one of the prominent organizations reported technology as a challenge that arose from the COVID-19 pandemic, which forced an abrupt adoption of different programs to keep performing successfully. Some differences can be observed in terms of the challenges presented in each organizational size. However, both organizational sizes found ways to overcome them.

The three events studied, the 2017 hurricanes, the January 2020 tremors, and the COVID-19 pandemic, definitely impacted organizations in Puerto Rico. Each brought different challenges that led leaders to rethink their organization's strategies to adapt to each situation. Most of them expressed that the COVID-19 pandemic has been the hardest to overcome out of the three events due to the fear of potential exposure experienced by employees and clients. In addition, this crisis has lasted longer, and the sense of unity has been affected by the social distancing restrictions. Additionally, the executive orders presented by the government limited the operations of this industry.

During Hurricane María, some became aware of the impact they had over their community as they became an essential source of food to people. They even gave away much free food and experienced solidarity



within employees. Therefore, even though the situation presented many challenges, organizations could survive and learn. Similarly, during the tremors in January 2020, the participating organizations were able to experience a sense of unity within employees. However, we must consider that most of the participating companies operated in the metropolitan area of Puerto Rico, which was not as affected by the tremors as the south area of Puerto Rico.

It can be said that these experiences evidenced the sense of urgency in the industry, given that food is a basic human necessity. Therefore, the organizations and their leaders understood the importance of having the adaptive capacity to respond as soon as possible to these unusual circumstances. The following quote from one of the participants helps show the limited time frame in which they had to rethink their strategies and continue offering their services as they are essential to their clientele: "The hurricane, if I am not mistaken, hit from Wednesday to Thursday ... on Friday we were already operating" (P6).

Thus, they experienced many learnings that are now being implemented in their current organizational plans. Some of the learnings include: understanding the importance of having backup plans, mitigating expenses, measuring risks, knowing what to prioritize, and adapting to every situation. At the same time, these experiences allowed them to step out of their comfort zones and change their strategies. For example: "Deliveries improved a lot from the crises because they were analyzed a lot and new strategies were defined" (P7).

Discussion

This study had three objectives: (a) explore the concepts of adaptive leadership and successful organizations, (b) develop a profile of adaptive leadership that will contribute to organizational change, and (c) compare the process of adaptation within different company sizes. Regarding the first one, Heifetz et al. (2009) definitions and characteristics of adaptive leadership and successful organizations were used as a conceptual framework. It was found that four out of the five characteristics of successful organizations were present in at least 50% of the participating companies, which resulted in a successful adaptation after the events studied. However, it would be interesting to see how this percentage would compare within other industries and a larger sample.

Regarding the second objective, a profile of adaptive leadership for Puerto Rico's context can be drawn. In addition to the five characteristics of successful organizations proposed by Heifetz et al. (2009), the following eight characteristics could be considered when recruiting and selecting influential leaders: (a) ability to lead tough conversations, (b) ability to adapt to change, (c) ability to admit and learn from mistakes, (d) ability to make fast decisions, (e) ability to serve as an example, (f) being a good communicator, (g) being flexible, and (h) being able to manage crises.



The process of interviews and assessments should consider these eight characteristics as a way to attend to our changing reality and take a proactive position on managing change. As stated by one of the executives, "the crises that we have had in the last three years are bigger than those I have seen in my career since I started in 1990, especially the hurricane and the pandemic" (P5).

Even though these characteristics would promote a more straightforward adaptation to change, it is also essential to understand that no leader can manage all circumstances, as the literature stated. Thus, leadership should be assumed by the person more equipped to attend the present scenario (Reeves et al., 2011). This statement challenges the idea of leadership most organizations have. Yet, having this open mindset can help organizations make smarter decisions and better approaches to new situations in a continuously changing world. Adaptive leadership is crucial to managing a complex and changing context; though, other leadership styles may be more beneficial to attend periods of stability.

Lastly, regarding the third objective, some differences in the adaptation process were evidenced for the participating organizations. Still, given that the sample size was relatively small, conclusions regarding the entire population cannot be drawn. Nevertheless, for this sample size, it can be observed that large organizations faced more challenges in the adaptation process. In addition to the ones presented by the authors, SMEs had more characteristics that helped them overcome adversity. Even though both organizational sizes could adapt to the situations, their adaptation processes were different, as demonstrated in Tables 2, 3, and 4. These tables also answer the research question: How has the food industry in Puerto Rico maintained afloat?

Concluding Remarks

It was demonstrated that adaptive capacity for the participating companies could help organizations maintain afloat amidst these unusual circumstances. However, organizational success cannot be guaranteed, not even fostering the characteristics presented in this study. Anyhow, success can be promoted through an open mindset that understands the malleability of leadership and considers the necessities of the current situation. It is essential to understand that leaders are constantly learning and finding new ways to operate regardless of external factors that may affect them. This study also helped show these particular organizations' positive outcomes out of this devastating situation. Some of these can be highlighted without disregarding the repercussions and adverse effects these events had on Puerto Rico's reality. Most of them had to do with our culture of solidarity and sense of community. These events helped the participating organizations gain awareness of the sense of unity present within their employees and their organizations' impact on their communities. Also, it helped them welcome new strategies such as work flexibility and the telework modality and implementing new services. In



the future, it will be evident that, what are now known as backup plans, will later be institutionalized as company policies.

This study faced some time and availability limitations due to the COVID-19 restrictions and the time frame of the academic year. In addition, the sample size was limited since several invited organizations did not consent to participate in the study. Therefore, some recommendations include repeating the study with a larger sample size when time is not a limitation. This way, organizational sizes can be broken down into four categories instead of two (micro, small, medium, and large organizations). This categorization will allow a better understanding of the effects of organizational size over each variable since, right now, concluding will not represent the whole population. Another recommendation would be to replicate the study with frontline workers instead of executives. This way, a new point of view could be considered, where the perspectives of executives and frontline employees can be compared and contrasted. Lastly, the study could also be replicated with other industries in Puerto Rico and other countries where a different context could help identify new adaptive characteristics.

For the sample analyzed, it was demonstrated that adaptive leadership helps manage change and overcome adversity. Other studies have also visibilized the benefits of adaptive leadership. For example, a study in Colombia demonstrated that 98.23% of the participants were convinced that their leader successfully adapted to the telework modality as a response to the COVID-19 pandemic (Torner, 2020). Therefore, it can be said that viewing organizations as complex adaptive systems helps respond to emergency and evolutionary environments rather than focusing on linear and balanced contexts that reduce innovation and creativity. However, while adaptive leadership may be ideal for moments of crisis, it may not be the best approach for managing periods of stability in organizations since it requires rethinking strategies which often leads to changing the current organizational policies and procedures. Consequently, other leadership styles, instead of adaptive leadership, may be ideal to face different scenarios once adaptation is reached. Thus, future studies can focus on the benefits of bureaucratic, transformational, or transactional leadership and many other leadership styles. The most important aspect to remember is that the way individuals and organizations react will also constantly change in a continuously changing reality. Therefore, every new scenario will likely challenge organizations to adapt and act according to the present situation, just like the participating organizations did to successfully survive hurricanes, tremors, and the ongoing global pandemic.

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