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Institutional Pressures and Green Practices in Small Agricultural Businesses in Mexico: The Mediating Effect of Farmers' Environmental Concern

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Abstract: Based on institutional theory, this study develops the understanding of how the institutional environment influences the propensity to adopt green practices. Taking into consideration the limitations of institutional theory, this research explores the mediating role of farmers' environmental concern in the relationship between institutional pressures and green practices. Environmental concern is a factor that can explain why businesses are heterogeneous in their green practices and stances even though they are embedded in the same institutional environment. Data obtained from 130 small businesses in the agricultural sector in Oaxaca, Mexico, reveal that institutional pressures influence green practices directly. The results also reveal that farmers' environmental concern partially mediates the relationship between these variables. This study tests the applicability of the theoretical framework of the institutional theory in this context and contributes to this theory by considering the role of the farmer. Specifically, it addresses environmental concern as a means through which businesses respond to institutional pressures, and how farmers implement green practices as a means for legitimacy. Environmental concern motivates environmental behavior in search of environmental conservation, but farmers mainly implement green practices to survive in the market in response to institutional pressures.

Keywords: institutional pressures; environmental concern; green practices; small agricultural business; institutional theory

1. Introduction

The negative environmental impact generated by corporate activities has attracted significant attention from governments, consumers, competitors, and masses around the globe, who demand business actions in favor of environmental preservation [1–3]. In order to survive in a competitive market, individual businesses are obligated to react to the growing focus on protecting the environment through green practices [4]. Businesses should interact and satisfy other actors in their institutional field by taking environmental sustainability into their organizational goals [3]. Institutional pressures are one of the main motivating forces that lead businesses to pursue green practices [5].

Using the institutional theoretical framework, a number of empirical studies have supported the effect of coercive, normative and mimetic institutional pressures on the implementation of actions tending to environmental care [2,3,6,7]. Institutional theory is frequently used to explain the external factors that force any business to initiate or adopt any new practice [2]. In the environmental

field, institutional theory is useful for understanding how definitions of ecological sustainability are developed, accepted, and spread among organizations [8]. This theory explains that, when green practices are widespread and considered socially valuable within the institutional field, enterprises adopt them as a path towards legitimacy. In this way, institutional pressures are isomorphic mechanisms through which institutions influence and spread the behavior of organizations [9]. However, studies that have examined the link between institutional pressures and green practices have generally been conducted in the context of conventional enterprises.

The first objective of this paper is to examine the relationship between three types of institutional pressures, namely: normative, coercive, and mimetic [9], and green practices in the context of small agricultural businesses in Mexico. Although this link has been well examined through the lens of institutional theory, there is still a lack of studies that analyze the subject in the context of small agricultural businesses. Research in the agricultural sector has suggested that institutional factors influence green practices [10,11]; however, these influences were not analyzed from the point of view of the institutional theory and, therefore, this research did not identify the three types of institutional pressure referred to by the theory. Thus, this paper contributes to existing literature by testing the relational model based on an institutional framework in a context not traditionally studied. Edmondson and McManus [12] have pointed out that when a mature theory that presents well-developed constructs and models that have been studied over time (such as institutional theory) is used as a theoretical background, studies contribute to the field of research by testing the theory in a new setting [12].

Although institutional theory has received substantial support in the literature, prior research has also identified the limitations of this institution-theoretic framework. Institutional theory is weak in explaining why enterprises adopt change whereas others do not, which leads to heterogeneity rather than homogeneity, even though they are embedded in the same institutional environment [13,14] and it ignores the role of the manager in processes of legitimacy [7]. Institutional theory focuses on the study of external factors that influence the implementation of green practices in business and does not consider internal organizational factors. In considering environmental concern as one of the most important motives for individual intention with regard to environmental behavior [15], the second objective of this paper is to explore the mediating role of farmers' environmental concern on the relationship between institutional pressures and green practices in small agricultural businesses. Environmental concern is a measure of valuation and positioning with respect to environmental issues. In this research, it is measured through the New Environmental Paradigm (NEP) Scale [16]. Studies carried out in an agricultural context suggest that the personal and psychological characteristics, attitudes and awareness of farmers influence their implementation of green practices [10,11,17–19]. For farmers to adopt green practices promoted by the institutional environment, farmers must first believe that the practices are important and indeed useful and generate stable and long-term income [20]. Thus, the major contribution of this study is the proposal of an extension of institutional theory to include the role of the farmer (who has the role of owner-manager) in the processes of legitimacy. Specifically, farmers' environmental concern is considered as a means through which businesses address institutional pressures by implementing green practices in search of their legitimacy. It is argued that environmental concern is a key element in explaining why, despite experiencing the same institutional pressures, businesses have different environmental stances and practices within the same institutional environment.

This study develops and empirically evaluates the links among institutional pressures, green practices and environmental concern. Survey data collected from a sample of small agricultural businesses, specifically businesses dedicated to greenhouse tomato production in Oaxaca, Mexico, are used to investigate these linkages. Agriculture plays a vital role in this emerging economy. Oaxaca is a Mexican state where greenhouse tomato cultivation is a growing trend, and it has the second largest presence of farms dedicated to this activity in the country [21]. In this study, institutional theory is used to explain the propensity of greenhouse tomato producers to adopt green practices in order to respond to growing pressures to be more environmentally sustainable. Small agricultural businesses are moving

away from an agricultural production system focused on productivity towards a more balanced approach. The existence of regulatory (coercive), market (normative) and competitive (mimetic) pressures force small agricultural businesses to think beyond conventional production processes and organizational boundaries by incorporating environmental concerns into their operations. More specifically, pressure from the government, customers, and competitors influences the decision to implement technical and organizational actions in service of environmental care. Against this backdrop, the farmer (owner-manager) plays an important role as a decision maker. Even if there are institutional pressures, the farmer, being autonomous in his decision-making, decides whether to implement changes by developing green practices in small agricultural businesses.

The remainder of this paper is organized as follows: Section 2 presents the theoretical review and hypotheses development, leading towards a formulation of the research model; Section 3 contains the research method; Section 4 describes the results; Section 5 discusses the empirical findings, practical implications, research limitations and suggestions for future research; and finally, the conclusions are highlighted in Section 6.

2. Theory Review, Hypotheses Development and Research Model

Institutional theory states that acting in accordance with the standards and expectations of the institutional context significantly improves the chance of survival of an organization [22]. This theory asserts that organizations seek to protect or improve their legitimacy [23] by meeting the expectations of the institutions and stakeholders that surround them [9]. Thus, businesses incorporate social legitimacy through adopting predominant social norms, influences and traditions [24].

DiMaggio and Powell [9] argue that the decisions of an organization are strongly influenced by three institutional mechanisms: coercive, normative and mimetic isomorphism. It is through these mechanisms that institutions influence and spread the behavior of organizations [9].

Coercive pressures are a set of formal and informal pressures exerted on an organization by other organizations upon which they are dependent and by cultural and societal expectations they face [9]. Government agencies are examples of powerful groups that may influence the actions of an organization [25].

Normative pressures stem primarily from professionalization [9]. Normative pressure entails socialization of a business within its institutional environment [7]. DiMaggio and Powell [9] originally proposed that different groups linked to professionalization are the source of normative pressures, for example, educational institutions promoting cognitive behavior, professionals from industry groups and associations, or nongovernment organizations having an interest in a particular industry. However, currently, a series of empirical studies supports the idea that clients are also one of the core components of these pressures because they also have a direct or indirect interest in the organization [2,4].

Mimetic pressures play their role in driving businesses to avoid uncertainty and risk by copying or replicating the processes or structures of other successful institutions [9]. Mimetic pressures occur when a business imitates the actions of successful competitors in the industry [2,4].

In the field of sustainability, the importance of the institutional theory in explaining organizational responsiveness to environmental issues is recognized both conceptually [5,8] and empirically (with studies developed even in emerging economies) [2,25,26]. Institutional theory helps us to understand how consensus is built around the meaning of sustainability and how concepts and practices associated with sustainability are developed, accepted, and spread among organizations [8]. Institutional pressure fosters business environmental responsiveness by creating a sense of legitimacy around such environmental actions [7], where legitimacy is understood as a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within an institutional environment [27]. This theory is used to understand different types of external factors that force a business to initiate or adopt a new practice [2,9], such as a green practice. Several empirical studies have found that institutional pressures influence the implementation of environmental care actions [2,3,6,7].

While institutional theory has received support in the literature, it also presents weaknesses. Traditionally, this theory attributes the persistent heterogeneity among enterprises to the differences in composition of their institutional fields. However, it does not explain from a strategic point of view the differences among organizations that share common institutional fields; that is, little explains how and why organizations respond differently to institutional pressures [14]. Institutional theory is weak in explaining why some enterprises adopt changes where others do not, even though they are embedded in the same institutional environment [13,14]; thus, the understanding of the relationship between organizational factors and institutional pressures is still limited [14]. A very important limitation of this theory is that it ignores the role of the owner-manager in the processes of legitimacy [7].

Considering that the owner/manager has a fundamental role in the internal dynamics of the business, an extension of the institutional theory that considers environmental concern as a mediating variable in the relationship between institutional pressures and green practices is proposed. Environmental concern can influence decision-making, leading businesses to respond heterogeneously to pressures within the same institutional field. Thus, both internal and external factors are important in explaining the environmental response of businesses.

In extending the institutional theory to the study context, it is important to understand the relationship between institutional pressures, green practices and farmers' environmental concern. Small agricultural enterprises in developing countries operate within a weak institutional framework. However, institutional pressures that force them to adopt green practices can be identified. Although many small agricultural businesses have an empirical functional structure that differs from conventional enterprises, many businesses have well-established production processes and well-defined organizational objectives, among which staying and growing in the market is a major objective. In this way, these businesses implement green practices seeking to be socially accepted. As in other environments, small agricultural businesses consider or follow standards, norms and expectations of their external stakeholders to achieve their legitimacy, increasing their chances of survival and success in the market. In Mexico, pollution control is under the jurisdiction of different agencies [28]. The Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación (SAGARPA) [Secretariat of Agriculture, Livestock, Rural Development, Fishery and Food] is the institution that mainly promotes the implementation of green practices in this sector by exerting coercive pressure on businesses, although government programs are often voluntary. Customers and competitors exert normative and mimetic pressures, respectively. Although, in this context, farmers (owners-managers) have a weak and incipient environmental awareness, as decision makers, they have a relevant role in the implementation of green practices. Farmers have autonomy in making decisions and according to the forces and influences they perceive from their institutional field, they grant an instrumental or intrinsic value to the environment and decide whether to implement or not environmental practices.

2.1. Effect of Coercive Pressures on Green Practices

Coercive pressures arise from political influence and a legitimacy problem [9]. Coercive pressures refer to government demands for firms to comply with environmental laws and regulations or to participate in environmental management programs [26]. They are the most obvious external pressures of the organization [29,30]. Previous studies found that coercive pressures have a significant direct impact on firm's environmental behaviors [2,3].

Businesses participate in environmental initiatives to acquire benefits or to avoid being banned/fined because of non-compliance with specific government laws or regulations [2]. Regulatory institutions can force them to comply with institutional expectations regarding environmental care through command and control instruments and economic incentive instruments [3,30,31]. Command and control instruments refer to mandatory regulations that allow institutions to impose restrictions through authoritative orders and rules and non-compliance may imply sanctions. Economic incentive instruments are voluntary programs that allow businesses to obtain subsidies or other concessions.

Some authors argued that mandatory regulations have a greater influence on the implementation of green practices [3,6,32]. Others argued that voluntary programs are more effective, since they provide enterprises with greater flexibility and access to a wider range of resources [30]. Greiner [33] considered single policy instruments to be inadequate in addressing the complexities associated with environmental care; instrument combinations may be more able to complement the respective strengths, weaknesses and distributional benefit implications of individual instruments.

In the agricultural context, a business will seek to conform to norms and rules for the purpose of legitimization. In an effort to reduce negative environmental externalities from agriculture, regulatory institutions pursue different policy approaches including regulation, information, persuasion and incentives [33]. Given that sustainable standards are stipulated in the certification programs that imply the adoption of green practices (e.g., the Organic and Good Agricultural Practices Certification Scheme), in order to qualify, the regulatory institutions oblige participants to perform the required practices [11]. SAGARPA is the main institution that promotes environmental care in the sector. It is worth mentioning that in Mexico, government institutions are weak and there is limited political will and little experience in strict regulatory compliance. Small agricultural businesses operate in an institutional context characterized by the presence of voluntary environmental programs (e.g., good agricultural practices and pollution-risk-reduction systems). Small agricultural businesses participate in voluntary programs mainly to obtain government subsidies in order to improve infrastructure or obtain training and technical support. They also participate to obtain official recognition that allows them to compete in better conditions and to eliminate potential threats, such as the tightening of environmental regulations. Hence, coercive pressures can influence green practices and thus, it is hypothesized that:

Hypothesis 1 (H1). *Coercive pressures will have a positive effect on the green practices of small agricultural businesses.*

2.2. Effect of Normative Pressures on Green Practices

Normative pressures are associated with professionalization [9]. Normative isomorphism entails socialization of an organization within its institutional environment [7]. Although DiMaggio and Powell [9] propose that normative pressures come from professionals aligned with industry groups and associations, various studies have proposed that over time, customer requirements are a basic normative pressure that influences the implementation of green practices [3,4,6,29]. If businesses do not feel pressure from their customers, they may remain reluctant to implement green practices.

Normative pressures come from domestic and foreign customers. In a study conducted in a developing economy, Li [3] showed that foreign customers significantly influence the implementation of green practices due to entry barriers in international trade and a growing demand for green products. Pressures from domestic customers have no significant effect, due to the still weak and uncertain environmental awareness of consumers and the relatively low standards of living that prevent accepting higher prices for green products [3]. In the agricultural sector, certain customer requirements have to be fulfilled in institutional arrangements (e.g., contract farming) [11], and some of these requirements involve the implementation of green practices. Then, customer requirements and their increasing environmental expectation form the core normative pressure for Mexican small agricultural businesses to implement green practices in order to retain customers or attract new ones. Above all, these pressures are perceived in those businesses that export their products. At the national level, businesses that serve specific market niches also perceive pressures from their domestic customers, although such pressures are incipient. Hence, normative pressures can influence green practices and thus, it is hypothesized that:

Hypothesis 2 (H2). *Normative pressures will have a positive effect on the green practices of small agricultural businesses.*

2.3. Effect of Mimetic Pressures on Green Practices

Mimetic pressures are the result of standard responses to uncertainty, which encourage imitation among organizations [9]. Mimetic pressures drive organizations to avoid uncertainty and risk by copying or replicating the processes or structure of other successful institutions [9].

Mimetic pressures motivate enterprises to imitate practices perceived as successful by their competitors within their industry [2–4,6,29,34] and to imitate actions of organizations with which they have social ties. According to Zhu and Geng [6], to be more competitive, enterprises should pay more attention to changes in the green practices of competitors, imitating and improving the practices of successful competitors. Previous studies found that mimetic pressures motivate enterprises to implement green practices [3,6].

When a business lacks clarity in establishing its organizational goals or in understanding technology, there is a higher chance of imitating other businesses [4]. This situation is frequent in the small agricultural businesses in Mexico. In the agricultural sector, the information shared by farmers is generally useful and practical, including "dos and don'ts" vis-a-vis pros and cons of a practice [11]. Farmers are more likely to adopt good practices after seeing their relative advantages successfully demonstrated [35]. Small agricultural businesses in Mexico tend to imitate green practices of the competitors they consider successful or those closest to their facilities. These businesses form collaborative networks to share their experiences and participate in learning processes, which enable them to improve their green practices. Hence, in this context, mimetic pressures can influence green practices and thus, it is hypothesized that:

Hypothesis 3 (H3). *Mimetic pressures will have a positive effect on the green practices of small agricultural businesses.*

2.4. Institutional Pressures and Green Practices: the Mediating Effect of Environmental Concern

Institutional theory has traditionally described how institutional pressures lead to common organizational practices in search of legitimacy. Although institutional theory has received support in the literature, it is weak in explaining why enterprises adopt change where others do not despite experiencing the same institutional pressures [13,14], thereby ignoring the role of the owner-manager in the processes of legitimacy [7]. Institutional theory suggests that the organization endorses and is capable of undertaking the actions required to acquire institutional legitimacy [7]. However, these aspects are critical, as not all organizations undergo changes in the same way. According to Greenwood and Hinings [13], the understanding of radical change requires both an analysis of the institutional field and its endogenous dynamics. The authors suggest that the interests and capacity for action are critical factors to effect the organizational change in response to institutional pressures. Supporting the above, Delmas and Toffel [14] point out that organizations vary to the extent that they support an institutional practice and in terms of the ability to implement organizational change. Their results revealed that the differences in managers' receptivity, that influence decisions made with regards to adopting management practices, lead enterprises to respond heterogeneously to similar institutional pressures. In this way, the role of the owner/manager as a decision maker is critical for the environmental responsiveness of organizations [4,7,26,30]. The varied environmental awareness of owners/managers can explain the heterogeneous environmental responsiveness of businesses to seemingly similar contextual pressures.

In addition, although institutional theory suggests that institutional pressures influence the implementation of green practices, the literature discusses whether this relationship is direct or not. Some authors argued that the relationship is not direct and analyzed the owner-manager's role in this relationship. Colwell and Joshi [7] found that when top management commitment is high, the relationship between institutional pressure and ecological responsiveness is enhanced. Some authors found that coercive pressures improve managerial perception of environmental care as a competitive opportunity which allows for the development of a higher level of environmental management [30].

Roxas and Coetzer [26] found that the relationship between the institutional environment and the environmental sustainability orientation of small firms is mediated by managerial attitudes towards the natural environment. However, there is a lack of empirical studies regarding the mediating role of environmental concern especially in agricultural small businesses.

In the agricultural sector, the implementation of green practices is driven by personal and psychological characteristics, attitudes and awareness of farmers [10,11,17,18]. Greiner and Gregg [36] suggested that the farmers with strong conservation motivations are most likely to adopt best green practices. Meijer, Catacutan, Ajayi, Sileshi and Nieuwenhuis [19] proposed that extrinsic factors (e.g., external environment) and intrinsic factors (e.g., knowledge, perceptions and attitudes of the potential adopter) influence the decision-making process on the uptake of a new practice.

In the context of this study, not all of the small agricultural businesses implement change by adopting environmental practices and do not implement it in a similar manner, even when they share the same institutional field. Given the primordial role of the farmer as an autonomous decision-maker, it is proposed that environmental awareness can help explain why small agricultural businesses have varying green practices and stances despite experiencing the same pressures from the institutional environment.

In this regard, environmental concern is one of the most important motives for individual intention with respect to environmental behavior and is influenced by the external environment [15]. The NEP Scale [16,37] is widely used to measure environmental concern. This scale captures the environmental concern of individuals and is a vital indicator of environmentally significant behavior [38]. Although the NEP scale has been applied to farmer samples [38,39], its applicability in small agricultural businesses in developing countries is under-developed. Considering the role of the farmer through environmental awareness (using the NEP scale) allows achieving a balanced measure that considers both the instrumental and intrinsic value given to the environment.

Hence, it is expected that farmers' environmental concern will mediate the link between institutional pressures and green practices. Thus, the following hypothesis is developed:

Hypothesis 4 (H4). *Environmental concern mediates the relationship between institutional pressures and the green practices of small agricultural businesses.*

2.5. Research Model

Figure 1 presents the conceptual model that analyzes the direct link between coercive, normative, and mimetic institutional pressures and green practices. It also highlights the mediating effect of environmental concern in the relationship between institutional pressures and green practices. It is predicted that institutional pressures stimulate environmental concern, and, this in turn leads to the implementation of green practices in small agricultural businesses.

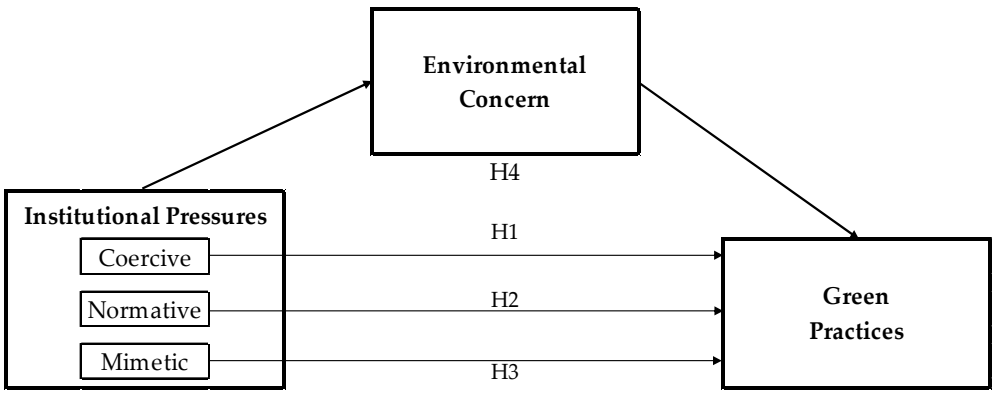

Figure 1. Research model.

3. Methodology

3.1. Questionnaire Development

The questionnaire included these key constructs: institutional pressures, green practices and farmers' environmental concern. Multi-item measures were generated for each construct, to enhance reliability and validity of measurement as well as to secure larger variability between survey individuals [40]. The questionnaire was developed over a three-step revision process. In the first step, based on an extensive review of the literature, managerial interviews and expert opinions from academia, a semi-structured questionnaire was designed and applied in 10 small agricultural businesses. The results served to provide feedback based on experience and sector knowledge and to improve the clarity of the items, use the appropriate terminology and avoid the omission of items used to measure the variables. Slight modifications were made to clarify the meaning or wording of the questionnaire. In the second step, a structured questionnaire was applied to 30 owners and managers of small agricultural businesses in order to test validity and reliability. In the third and final step, the final survey instrument was designed based on the results of the previous step and was applied to the final sample of respondents. 5-point Likert-type scales were used for measuring the perceptions of the surveyed individuals for all 33 measures in the theoretical model.

3.2. Sampling and Data Collection

Data comes from a collective effort conducted between June of 2016 and January of 2017. The target businesses were small agricultural businesses with at least 1 year of experience in the production and commercialization of greenhouse tomatoes in the Valles Centrales [Central Valleys] and Mixteca regions of the State of Oaxaca, México. The target subjects were the owners and/or managers, who, being the decision makers in the businesses, have more accurate information. The agricultural sector was selected due to its impact on environmental conditions, incipient but growing participation in environmental care initiatives, and contribution to the economy. The state of Oaxaca was selected because it has reported rapid growth in tomato production and has the second largest presence of small businesses dedicated to the activity. Valles Centrales [Central Valleys] and the Mixteca are regions of Oaxaca with higher levels of horticultural production and a larger number of small businesses engaged in such activity in the state [21]. This context also was selected because it is little studied in the field of institutionalism, and it is important to know if the theoretical framework of the institutional theory is applicable in the agricultural arena.

The survey instrument in Spanish was applied face-to-face to ensure complete responses. The sampling method was non-probabilistic due to the lack of a formal database that indicates the number and location of existing small agricultural businesses. To reduce the implicit bias of this type of sampling, specific routes were established in the two regions so that small businesses would have a similar probability of being included in the sample. When a small agricultural business was located on the route, the respondent was identified, the objective of the investigation was explained and he/she was invited to participate by answering the questionnaire. The questionnaires were applied to those who agreed to be surveyed due to the distrust that respondents had about the use of the information. During the routes, 136 small agricultural businesses were located; however, data from six small agricultural businesses could not be obtained because the owners and/or managers were not present in the business. Therefore, the sample consists of 130 small agricultural businesses (96%). There were 123 male respondents (95%). The age (number of years in operation) of the 130 surveyed small businesses ranged from 1 to 11 years. The size of the small agricultural business varies between 400 m^2 and 6 hectares. Table 1 gives a picture of the sample profile.

Table 1. Sample profile.

Region	Valles Centrales		Mixteca	
	80 (61.54%)		**50 (38.46%)**	
(Years in operation)	1–6 75 (93.75%)	7–11 5 (6.25%)	1–6 50 (100.00%)	7–11 0 (0%)
Size (Hectares of greenhouse)	<3 74 (92.50%)	3–6 6 (7.50%)	<3 47 (94.00%)	3–6 3 (6.00%)

3.3. Variables and Measures

Institutional pressure refers to the degree to which small agricultural businesses are influenced by coercive, normative and mimetic mechanisms (demands and/or influences of the government, customers and competitors, respectively). Based on previous studies [3,6,7,29], 11 items measured this variable and loaded on three factors: coercive, normative and mimetic pressures. The items capture farmers' perceptions of the extent to which institutional pressures exert significant influence on small agricultural businesses to integrate environmental care actions into their operations. On the five-point Likert scale (1, strongly disagree, and 5, strongly agree), respondents were asked to report to what degree they agreed or disagreed with the statements shown in the first column of Table 2. To test hypotheses 1–3, each factor was used as a first-order construct. To test hypothesis 4, the sum of three factors was used to measure institutional pressures as a single second-order construct.

Green practices measure the frequency with which small agricultural businesses develop technical and organizational actions to reduce the negative environmental impact generated by it's productive processes. Based on previous studies [7,41,42], 13 items were elaborated to measure this construct. For each item on the questionnaire, respondents were asked how often they included activities aimed at caring for the environment. Respondents were asked to respond on a Likert five-point scale, from 1 (never) to 5 (always). Green practices loaded on two factors: organizational and technical aspects. The sum of both factors was used to measure green practices as a single construct. Factors and their measures are presented in Table 3.

Environmental concern indicates the valuation and positioning regarding the subject of the environment. Environmental concern refers to the degree to which farmers give instrumental value to the environment and/or they give intrinsic value to the environment and value themselves within nature as a whole. It was measured through the revised NEP scale [16]. Although there is wide convergence in the validity of the NEP scale to measure issues related to environmental concern, there is far less consensus on the question of whether the scale measures a single construct or is multidimensional. There is considerable inconsistency in the number of dimensions actually obtained, studies have found from one up to five dimensions and report some discrepancies in the loadings of individual items. In this way, the dimensions are often sample specific [16,43]. The nine items in the NEP scale are loaded on two factors: ecocentrism and anthropocentrism. The sum of both factors was used to measure environmental concern as a single construct. On the five-point Likert scale (1, strongly disagree, and 5, strongly agree), respondents were asked to report to what degree they agreed or disagreed with the statements shown in the first column of Table 4.

Additional variables, size, age, and technological level of the greenhouse were used as control variables in the research model. Size refers to the area in square meters of the greenhouse used for production. Age refers to the number of years in operation of the business. To measure the technological level, a scale of 1 to 5 was used, considering five technological levels that evaluate the typology, equipment and technology of greenhouses [44].

3.4. Reliability and Validity of the Measurement

Content validity of the measures was assured by an extensive review of the literature, managerial interviews and expert opinions from academia. Prior to applying the questionnaires to the final sample

of respondents, the initially drafted questionnaire was applied. Based on their feedback, the wording of a few items were changed and some items were removed as they were not applicable in the context.

Convergent validity was assessed via a factor analysis with Varimax rotation and Kaiser normalization. The factor loadings indicate the correlation between an item (indicator) and its corresponding factor. High factor loadings give evidence of construct validity. All constructs have an average factor loading above 0.6. This indicates a satisfactory representation by their indicators [45]. Each factor composite reliability is larger than 0.8, indicating the convergent validity and internal consistency. The total variance explained by the factors for all the constructs is higher than 70%, ensuring the practical significance of the derived factors [46]. To test the appropriateness of the factor analysis, Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy test was used. High values of the KMO test (0.60 or above) indicate that conducting factor analysis on the data is appropriate [47].

Discriminant validity was assessed by checking that, at a confidence interval of 95%, the correlation between each pair of items did not contain the value 1. During the Confirmatory Factor Analysis (CFA), it was observed that each item loaded on one and only one of the factors.

Reliability was tested through Cronbach's alpha, which assumes that the items measure the same construct and that they are highly correlated. All Cronbach's alpha values are above 0.7 and can be considered satisfactory [48]. The factor analysis and Cronbach's alpha was calculated using SPSS statistics 22. Factor analysis results are summarized in Tables 2–4.

Table 2. Factor analysis of institutional pressures.

To What Degree Do You Agree with the Following Statements?	1	2	3	Communality
1. Coercive Pressures				
Compliance with regulatory requirements positively influences the competitiveness of the small agriculture business.	0.744	0.239	−0.161	0.636
Voluntary standards represent a market opportunity for small agriculture business.	0.794	−0.052	0.363	0.766
The government provides subsidies and preferential support to participate in voluntary programs.	0.897	0.088	0.199	0.851
2. Normative Pressures				
National customers demand production under conditions of respect for the environment.	0.188	0.674	−0.264	0.560
National customers ask for production processes before making a purchasing decision.	0.111	0.684	−0.033	0.482
International customers demand production under conditions of respect for the environment.	0.075	0.891	0.308	0.894
The growing environmental awareness of international customers encourages implement green practices.	0.015	0.895	0.345	0.920
International customers ask for production processes before making a purchasing decision.	0.002	0.898	0.311	0.904
3. Mimetic Pressures				
The leading businesses in our sector set an example for environmentally responsible conduct.	0.042	0.242	0.739	0.606
The leading businesses in our sector are known for their practices that promoted environmental preservation.	0.047	0.053	0.899	0.813
The leading businesses in our sector work on ways to reduce their impact on the environment.	0.248	0.075	0.809	0.721
Percentage of variance	19.154	31.442	23.514	
Cronbach's alpha	0.771	0.881	0.809	
Composite reliability	0.854	0.907	0.858	
KMO measure of sampling adequacy			0.728	

Note: Rotation method: varimax with Kaiser normalization. The rotation has converged on five iterations. Extraction method: principal component analysis.

Table 3. Factor analysis of green practices.

How Often Does the Small Agricultural Business . . .	1	2	Communality
1. Organizational Aspects			
Communicate to its workers the obligation to take care of the environment during the development of their activities.	0.862	−0.070	0.749
Continually inspect that activities related to environmental care are being carried out.	0.888	−0.065	0.793
Adapt or modify the positions and activities of workers if necessary in order to facilitate environmental care.	0.872	0.154	0.785
Ensure that workers have the skills required to carry out their activities (including environmental activities).	0.852	0.305	0.819
Collaborate with other business to improve aspects related to environmental care.	0.864	0.183	0.780
Prioritize the purchase of inputs and products with low environmental impact.	0.802	0.18	0.675
Compile reports on environmental care.	0.697	0.219	0.534
Participate in events or establishes collaborations with environmental institutions (e.g., campaigns to collect empty containers of agrochemicals).	0.700	0.243	0.549
2. Technical Aspects			
Promote waste reduction (e.g., promoting reuse)	0.216	0.877	0.816
Promote the appropriate disposal/treatment/storage of remaining debris.	0.031	0.897	0.806
Promote the use of clean energies.	0.13	0.816	0.683
Promote the reuse and recycling of products.	0.032	0.762	0.582
Perform constant monitoring and sampling at plants to identify and control pests and diseases.	0.42	0.617	0.557
Percentage of variance	43.282	26.931	
Cronbach's alpha	0.936	0.872	
Composite reliability	0.942	0.898	
KMO measure of sampling adequacy		0.862	

Note: Rotation method: varimax with Kaiser normalization. The rotation has converged on three iterations. Extraction method: principal component analysis.

Table 4. Factor analysis of environmental concern.

Do You Agree or Disagree [a] That:	1	2	Communality
1. Ecocentrism			
We are approaching the limit of the number of people the earth can support.	0.881	0.257	0.842
Humans are severely abusing the environment.	0.767	0.324	0.693
Plants and animals have as much right as humans to exist.	0.807	0.389	0.802
Despite our special abilities humans are still subject to the laws of nature.	0.853	0.265	0.797
If things continue on their present course, we will soon experience a major ecological catastrophe.	0.741	0.345	0.668
2. Anthropocentrism			
Humans have the right to modify the natural environment to suit their needs.	0.387	0.838	0.852
Human ingenuity will insure that we do NOT make the earth unlivable.	0.291	0.838	0.786
The earth has plenty of natural resources if we just learn how to develop them.	0.391	0.775	0.754
The so-called "ecological crisis" facing humankind has been greatly exaggerated.	0.231	0.837	0.754
Percentage of variance	41.466	35.747	
Cronbach's alpha	0.917	0.907	
Composite reliability	0.906	0.893	
KMO measure of sampling adequacy		0.896	

Note: Rotation method: varimax with Kaiser normalisation. The rotation has converged on three iterations. Extraction method: principal component analysis. [a] Agreement with the five ecocentrism items and disagreement with the four anthropocentrism items indicate pro-environmental care responses.

4. Results

The zero-order matrix of correlations between variables and the descriptive statistics are presented in Table 4. The majority of correlations are modest. The average age of the small agricultural businesses was 6.3 years, with a standard deviation of 1.5 years. The average size (in square meters of the greenhouse used for production) was 6003 m^2 with a standard deviation of 1794 m^2 (see Table 5).

Later, an analysis of correlation, controlling by size, age and technological level of small agricultural businesses, was conducted in order to determine the relationship between variables (see Table 6).

Table 5. Descriptive statistics and correlation matrix.

	Bivariate Correlations									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1. Coercive pressures	1									
2. Normative pressures	0.218 *	1								
3. Mimetic pressures	0.257 **	0.366 **	1							
4. Organizational aspects	0.671 **	0.639 **	0.464 **	1						
5. Technical aspects	0.103	0.335 **	0.675 **	0.355 **	1					
6. Ecocentrism	0.701 **	0.572 **	0.333 **	0.885 **	0.206 *	1				
7. Anthropocentrism	0.282 **	0.704 **	0.420 **	0.748 **	0.568 **	0.673 **	1			
8. Size	0.238 **	0.687 **	0.346 **	0.498 **	0.275 **	0.414 **	0.444 **	1		
9. Age	0.325 **	0.561 **	0.322 **	0.482 **	0.269 **	0.447 **	0.421 **	0.751 **	1	
10. Technological level	0.143	0.429 **	0.341 **	0.364 **	0.276 **	0.238 **	0.314 **	0.572 **	0.549 **	1
Media	2.454	1.858	2.082	2.847	3.408	2.985	2.985	6003.077	3.600	3.108
Standard deviation	0.864	1.066	0.744	0.888	0.776	0.977	0.887	1794.665	1.543	0.729

Note: ** Correlation is significant at levels equal to or less than 0.01. * Correlation is significant at levels equal to or less than 0.05.

Table 6. Partial correlations.

	Partial Correlations					
	1	**2**	**3**	**4**	**5**	**6**
Coercive pressures	1					
Normative pressures	0.059	1				
Mimetic pressures	0.184 *	0.177 *	1			
Organizational aspects	0.646 **	0.462 **	0.341 **	1		
Technical aspects	0.024	0.198 *	0.632 **	0.241 **	1	
Ecocentrism	0.663 **	0.429 **	0.218 *	0.861 **	0.094	1
Anthropocentrism	0.178 *	0.608 **	0.303 **	0.669 **	0.510 **	0.592 **

Note: Control variables: size, age and technological level. * Correlation is significant at levels equal to or less than 0.05. ** Correlation is significant at levels equal to or less than 0.01.

The regression equations met the independence criteria and no multicollinearity problems were found. Multicollinearity was measured by variance inflation factors (VIF). All of the VIF values are below 4.0 (lower than the recommended value 10) [46], indicating that the effects of multicollinearity are limited.

Three regression models were developed in order to explore and quantify the relationship between institutional pressures and green practices, as well as to test Hypotheses 1 to 3 (see Table 7).

Table 7. Regression analysis (institutional pressures and green practices).

Model			Standardized Coefficient β	T Value	*p*-Value	R^2	Decision
Regression	**Independent Variable**	**Dependent Variable**					
1 (H1)	Coercive pressures	Green practices	0.390	5.323	0.001	0.402	Supported
2 (H2)	Normative pressures	Green practices	0.499	5.192	0.001	0.397	Supported
3 (H3)	Mimetic pressures	Green practices	0.573	8.726	0.001	0.544	Supported

Note: Control variables: size, age and technological level.

According to Hypothesis H1, coercive pressures were found to be related to green practices ($\beta = 0.390$, $p < 0.001$). Similar to the results of previous studies [3,6,30–32] in small agricultural

businesses, the pressures exerted by the government are crucial for the implementation of green practices. In accordance with Hypothesis H2, normative pressures were found to be related to green practices (β = 0.499, $p < 0.001$). Coinciding with Li [3], small agricultural businesses are obliged to meet the requirements of their customers in order to continue operating in the markets. The hypothesis H3 was also accepted (β = 0.573, $p < 0.001$), coinciding with the results of previous studies [3,6].

The mediating effect of environmental concern in the relationship between institutional pressures and green practices (Hypothesis 4) was tested by employing Baron and Kenny's [49] method. To test for mediation, three regression equations should be estimated: (1) independent variable—mediating variable; (2) independent variable—dependent variable; (3) both, independent variable and mediating variable—dependent variable (see Table 8). To establish mediation, the following conditions must hold: (1) The independent variable must influence the mediating variable in the first equation; (2) the independent variable must influence the dependent variable in the second equation; and (3) the mediator must affect the dependent variable in the third equation. If the conditions hold in the predicted direction, in the third equation, the effect of the independent variable on dependent variable: (1) Can be reduced to an insignificant coefficient (supporting a complete mediation); or (2) can continue being significant, but decrease in magnitude (partial mediation).

Table 8. Estimated regression coefficients (mediation model—latent variables).

Model			Standardized Coefficient β	T Value	*p*-Value	R^2
Regression	**Independent Variable**	**Dependent Variable**				
1	Institutional pressures	Environmental concern	0.791	10.997	0.001	0.620
2	Institutional pressures	Green practices	0.828	12.307	0.001	0.668
3	Institutional pressures	Green practices	0.458	5.590	0.001	0.752
	Environmental concern		0.468	6.445	0.001	

Note: Control variables: size, age and technological level.

Then, regarding hypothesis H4, results show that the conditions for mediation are met: (1) Institutional pressures influence environmental concern (β = 0.791, $p < 0.001$); (2) institutional pressures influence green practices (β = 0.828, $p < 0.001$); and (3) environmental concern influences green practices (β = 0.753, $p < 0.001$). However, in the third equation, the regression coefficient between institutional pressures and green practices is lower than in the second equation, although it continues to be significant (β = 0.458, $p < 0.001$) supporting partial mediation.

The significance of the indirect effect was investigated via the bootstrapping technique using the PROCESS macro for SPSS (Model 4; Hayes [50]). The bootstrapping technique is a nonparametric resampling procedure that does not impose the assumption of normality of the sampling distribution [51]. PROCESS calculates bias-corrected and accelerated bootstrapped confidence intervals (10,000 resamples) for the size of each direct or indirect effect, with a significant effect indicated by a confidence interval that does not contain zero [50]. In this paper, the significance of the indirect effect was investigated via the bootstrapping technique with 95% bias-corrected and accelerated confidence interval and 10,000 bootstrap resamples. The indirect effect is significant because it does not include zero (β = 0.325 with T-value = 5.590, $p < 0.01$, 95% CI [0.210–0.440]).

Besides bootstrapping, the significance of the mediation effect was also investigated via the classical Sobel test. The resulting Sobel test value is 8.466 (p-value = 0.000 < 0.05) and is significant, indicating that there is a mediating effect.

5. Discussion

The research aimed to address two specific gaps in the literature:

(1) To test whether institutional pressures influence the green practices of small agricultural businesses in a developing economy, a context in which the issue has been little studied.
(2) To explain why small agricultural enterprises are not homogenous in their green practices, even when they receive the same pressures from their institutional field. As an extension of institutional theory, the role of the manager in the processes of legitimacy is considered, proving the mediating role of environmental concern in the relationship between institutional pressures and green practices.

Based on the central arguments of institutional theory [9,22], the first gap was addressed. To address the second gap, the limitations of institutional theory were considered [7,13,14] and an extension of the theory was presented that includes the role of the farmer, specifically in terms of environmental concern.

The findings of the study support the argument that the institutional environment significantly influences the implementation of green practices. Small agricultural businesses are deeply rooted in the local communities where they operate; acting in accordance with the standards and expectations of the institutional context significantly improves the chances of survival of an organization [22]. Among the three dimensions of the institutional pressures, the coercive dimension has the lowest impact on green practices in the sample. It may be attributed to the relatively loose systems that operate in developing countries [26]. In Mexico, as in other developing economies, the regulatory dimension of the institutional environment is not as developed and advanced as in developed economies. Government institutions are weak and there is limited political will and little experience in strict regulatory compliance [52]. However, the results show that coercive pressures play a particularly important role in environmental care, especially at the level of voluntary programs, coinciding with previous studies [28,52–54]. As Tey, Li, Bruwer, Abdullah, Brindal, Radam, Ismail and Darham [11] argue, in the agricultural sector, voluntary programs include sustainable standards that imply the adoption of green practices, in order to qualify. Regulatory institutions oblige participants to perform the required practices. Responding to coercive pressures by implementing green practices represents an opportunity to improve business competitiveness and obtain subsidies and preferential government support. Regarding normative pressures, given that some small agricultural businesses participate in the export process and attend specific market niches at the national level, they perceive pressures from customers that force them to implement green practices. They respond to such pressures to retain current customers or attract new customers, meeting market expectations. Mimetic pressures have the highest impact on green practices. This finding may be attributed to high mimesis in this context. It is common for small agricultural businesses to imitate the green practices of the competitors they consider most successful in the sector or those closest to their facilities. Moreover, small agricultural businesses form collaborative networks to share experiences and participate in learning processes to improve their green practices. Supported by Tey, Li, Bruwer, Abdullah, Brindal, Radam, Ismail and Darham [11], the results suggest that since farmers know each other and speak the same language, they influence the implementation of green practices, because they share information that is useful and practical, including "dos and don'ts" vis-a-vis pros and cons of a practice.

The partial mediating effect of environmental concern on the relationship between institutional pressures and green practices emphasizes the importance of considering the role of the farmer in the processes of legitimacy and environmental care. An extension of the institutional theory has been developed that incorporates and empirically supports farmers' environmental concern within its framework. Farmers have an important role in the search for business legitimacy because they decide to implement actions considered socially valuable in response to institutional pressures. The results provide evidence to suggest that institutional pressures influence the adoption of green practices through environmental concern. More specifically, farmers' environmental concern is

included as a mechanism for explaining why small agricultural businesses vary in their practices and stances even though they are embedded in the same institutional environment. This is because environmental concern differs from farmer to farmer. The results support the proposal of other authors to consider the role of the owner-manager in the relationship between institutional pressures and green practices [7,26,30]. This research also contributes to the literature analyzing the mediating role of environmental concern using the NEP scale. Taking into consideration that the dimensions are often sample specific, in this specific context, the NEP scale is composed of two dimensions: an anthropocentric dimension based on the instrumental value of the environment for humans and an ecocentric dimension that contemplates the environment through its intrinsic value and that values the human within nature as a whole. Measuring environmental concern with the NEP scale helped to test its applicability in the context of small agricultural businesses in a developing country. The partial mediating effect can be attributed to the fact that in developing countries small businesses owners are often caught between the need for conservation and the need for survival, but they address pressures mainly to achieve survival [54]. In this way, this research shows that both extrinsic and intrinsic factors influence the decision-making process on the uptake of a new practice.

5.1. Practical Implications

The practical implications are particularly relevant to governmental institutions. The government must reinforce institutional structures to sensitize and encourage farmers to implement green practices. Government must promote environmental care as a competitive opportunity in the market. It is important that government policies and programs for environmental sustainability can be improved to provide small businesses with information, knowledge, organizational tools, and resources to promote and improve environmental care and reduce their negative environmental impact. Government engagement with farmer associations may be an effective tool in influencing the local business culture towards environmental management.

5.2. Limitations and Suggestions for Further Research

First, perceptual measures were used to quantify the variables, so that future studies could use complementary objective measures. Second, other outcome variables such as performance could be considered in the research model to determine the extent to which taking care of the environment provides benefits to small businesses. Lastly, the results are only valid for small agricultural businesses dedicated to greenhouse tomato production, and future research could extend the analysis to other small businesses in the agricultural sector, or even to other sectors within the context of developing economies.

6. Conclusions

The results of this study suggest that institutional pressures influence the implementation of green practices of small agricultural businesses. The partially mediating effect of farmers' environmental concern supports an extension to institutional theory including the role of the owner/manager in the processes of legitimacy. As a contribution to existing empirical studies, the relationship between institutional pressures and green practices in small agricultural businesses is analyzed in order to provide evidence for a business sector that has traditionally received little attention in studies on institutional perspective, social sciences, and environmental management. This paper shows that environmental care is not confined to large industries in developed countries. Small agricultural businesses in developing countries such as Mexico, characterized by their small size and limited experience in implementing green practices, can also implement green practices influenced largely by the institutional field. These results highlight the importance of regulatory institutions to promote environmental care. Customers and competitors are also key players that stimulate environmental responses.

Considering that a weakness pointed out in the literature is that institutional theory does not consider the manager's role in the processes of legitimacy, this study contributes to the theory by including farmers' environmental concern as a variable that might explain why despite experiencing the same institutional pressures they implement different green practices and stances. Small agricultural businesses vary to the extent that they support an institutional practice and in terms of the ability to implement organizational change. Then, acting in accordance with demands from the institutional environment is a business strategic decision. Farmers implement green practices according to their personal and business interests. This is because environmental concern differs from farmer to farmer and is influenced by the institutional environment.

The findings provide empirical evidence on the importance of institutional pressures as a means of promoting environmental concern and influencing the implementation of green practices. Although farmers who are driven by environmental concern choose to implement green practices to preserve nature, it is important to emphasize that in developing countries the main reason seems to be to relieve the pressures related to environmental care in order to achieve their survival.

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