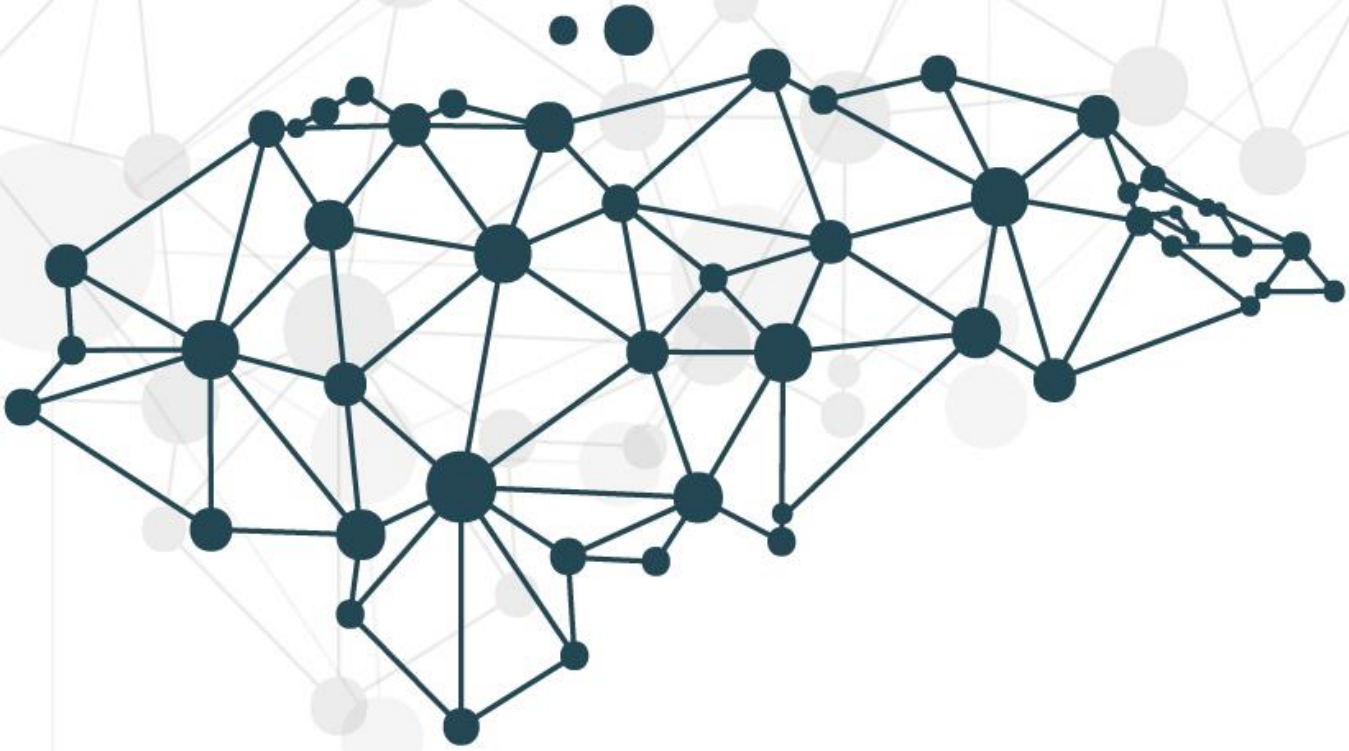
DIAGNÓSTICO
DE SISTEMAS DE MERCADO



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USAID
DEL PUEBLO DE LOS ESTADOS UNIDOS DE AMÉRICA

HONDURAS MARKET SYSTEMS DIAGNOSTIC 2020

Published April 15, 2021

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This report is made possible by the support of the American People through the United States Agency for International Development (USAID).
The contents of this report do not necessarily reflect the views of USAID or the United States Government.

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ACKNOWLEDGEMENTS

The 2020 Market System Diagnostic was developed by the National Autonomous University of Honduras Center for Economic and Social Investigation (UNAH-IIES), the Council of Private Enterprise Honduras (COHEP), and the USAID/Honduras Transforming Market Systems (TMS) Activity.

The Diagnostic team would like to express gratitude to the trade organizations and associated chambers of commerce in Honduras for their engagement and support of this research initiative, helping to secure the participation of enterprises in the study and contributing expertise to analysis of findings.

National Chamber of Tourism of Honduras (CANATURH)
Federation of Chambers of Commerce and Industry of Honduras (FEDECAMARAS)
Chamber of Commerce and Industry of Tegucigalpa (CCIT)
Chamber of Commerce and Industries of Cortes (CCIC)
Chamber of Commerce and Industries of Choloma (CCICH)
Chamber of Commerce and Industries of Atlántida (CCIA)
Chamber of Commerce and Industries of Tela (CCIT)
Chamber of Commerce and Industries of Comayagua (CCICOM)
Chamber of Commerce and Industries of Copán (CCICR)
Chamber of Commerce and Industries of Olancho (CCIO)
Chamber of Commerce and Industries of the South (CCIS)
Chamber of Commerce and Industry of La Paz (CCILP)
Chamber of Commerce and Industries of Siguatepeque (CCISIGUA)
Chamber of Commerce and Industry of Santa Barbara (CCISB)

The Diagnostic team is highly indebted to the more than 800 representatives from different Honduran companies and the private sector that invested their time in responding to the enterprise survey and in participating in multiple workshops that helped to shape the conclusions in this report. Their contribution, which reflects the diversity of geographies and economic activities in Honduras, is critical to ensure that these decision-makers have information on what their needs are.

Without working together, it would not have been possible to develop the 2020 Diagnostic. We are proud to have your support and appreciate your invaluable collaboration.

INTRODUCTION

Our intention with the 2020 Market Systems Diagnostic is to help you as a reader – whether a policymaker, an academic, or a business leader – develop a deeper understanding of the Honduran economy to diagnose what drives or inhibits inclusive economic growth in Honduras, so that you may make more evidence-based decisions that lead to real, concrete changes in Honduran society.

This study employs a structural analysis method to analyze the issues that define the performance of the Honduran market system modeling their pairwise interactions to determine the influence, dependence, and trajectory of change for each issue and to develop a more holistic understanding of how and why the market system is evolving to become more (or less) competitive, resilient, and inclusive.

There are volumes of research on each of the issues analyzed. This Diagnostic does not attempt to go into depth on any one issue. Rather, the purpose of the Diagnostic is to try to fill in a knowledge gap with regards to how these diverse issues, often analyzed and considered in separate fields of study, interact together as part of a complex adaptive system. Structural analysis provides a new perspective into what matters in terms of the policy debate for inclusive economic growth in Honduras.

Recognizing that many of you readers will be experts within your own domain, we ask that while reading this analysis, you widen your focus to consider a "bigger picture" on what are the complex workings of the Honduran market system. It is our sincere belief that if we all are open to changing our frame of reference for understanding the complex problems facing Honduras, we can develop a newer and perhaps more profound understanding of the challenges to find more novel solutions for change.

We cannot solve our problems with the same thinking we used when we created them.
- Albert Einstein

METHODOLOGY

Structural analysis[1] is a methodology to construct a holistic knowledge of the Honduran market system by examining multiple interactions between the relevant issues in the market system and how they feedback to one another. Traditionally, we have analyzed these issues in a single dimension by studying the issue of job creation, crime, or rule of law singularly. Or perhaps we analyze the issues in a two-dimensional perspective, looking at how job creation influences rule of law, etc. Structural analysis supports a third dimension of analysis, to understand how for example the multiple issues of lack of jobs, prevalence of gangs and local law enforcement interact in complex and interconnected ways as part of a larger, structural dynamic that creates patterns of behavior e.g. delinquency we see in the system.

STEP 1. STAKEHOLDER WORKSHOPS TO IDENTIFY RELEVANT VARIABLES.

The first step was to identify all the relevant issues (subsequently referenced as factors or variables) that influence the Honduran market system based on the viewpoints of private enterprise, economists, and other public stakeholders. The team held a set of stakeholder workshops in 5 municipalities involving 65 participants on themes of economic competitiveness, inclusion, and resilience to shocks and stressors. Participants were prompted to provide specific experiences or stories which were subsequently recorded and transcribed to be able to come-up with a final list of thirty-five relevant variables.[2]

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[1] See Godet, M. From Anticipation to Action: A Handbook of Strategic Prospective; Future-Oriented Studies; UNESCO Pub.: Paris, France, 1994; ISBN 978-92-3-102832-8.

[2] The iterative process of structural analysis led to identification of another 30 factors which resulted in 65 total factors used at the first iteration of structural analysis. Subsequent quantitative regression analysis and expert feedback reduced these 65 factors to 43 factors combining similar factors into one and eliminating several which were determined to be beyond the boundaries of the analysis.

STEP 2. QUANTIFY VARIABLES INTO INDICATORS THROUGH ENTERPRISE SURVEY.

The second step was to transform the identified variables into measurable indicators. In many cases, multiple indicators are used to measure the same variable given the difficulty in quantifying variables. The list of these indicators analyzed is presented in Annex I: Indicators. These indicators were subsequently transformed into survey questions which were incorporated in an enterprise survey completed in November 2020 with a total of 786 respondents. The enterprise sample is provided below.

FIGURE 1. ENTERPRISE SAMPLE CHARACTERISTICS

By location		**By industry**		**By size**	
Atlantic Coast	35	Agroindustry	92	Micro	373
Central	185	Commerce	102	Small	219
Eastern	23	Distributors	73	Medium	55
Southern	213	Food services	94	Large	43
Sula Valley	177	Lodging	44	Not available	58
Western	27	Support services	111		
Western Central	88	Tourism services	90		
		Other	142		

STEP 3. IDENTIFY PAIRWISE INFLUENCES BETWEEN VARIABLES.

The next step was to identify the pairwise influences between variables, or in other words if variable A influenced variable B. The pairwise evaluation tested these influences met certain conditions:

- Test that A influences B and that the relationship isn't the inverse i.e. B influences A.
- Test that A influences B and the relationship is causal and not a simple correlation.
- Test that A influences B directly and it is not an indirect influence. An indirect influence would a case where A influences C which then influences B i.e. A does not directly influence B.

The team used two methods to assess whether the pairwise influences between variables existed:

1. Statistical and regression analysis first using a statistical method called LASSO (least absolute shrinkage and selection operator) to select predictor variables and second validating the identified statistical relationships with a standard multivariate regression model i.e. logit, Poisson, linear or ordinal logistic as relevant depending on the type of dependent variable. The results of these regressions are presented in Annex IV: Regression Models.
2. Expert workshops to validate the pairwise influences found between variables. These expert workshops were organized around archetypical problems or common patterns of behavior seen in the Honduras market system and included group-based causal loop diagramming to be able to identify additional pairwise influences between variables not identified in regressions.

After these connections were identified, at least ten subject matter experts then evaluated the pairwise connections to confirm if the connections indeed existed and if they existed, to then rate the strength of this relationship on a scale of 1 to 3 – with 1 being a weak influence exists and 3 being a strong influence exists. The results of these pairwise connections are presented in Annex II. Pairwise Influences.

FIGURE 2. NOTES TO READER WHEN READING THIS DOCUMENT

This document presents the analysis of quantitative and qualitative data as well as the interpretation of experts and stakeholders of the findings of this Diagnostic. The findings are referenced by their source in superscripts used throughout the text. In cases where quantitative data is presented, a numeric superscript references the related indicator from the enterprise survey. As an example, "*the*

number of enterprises that report more "bad" interactions with government institutions231" refers to analysis of indicator #231. To present in simple terms to the average reader the conclusions of statistical regressions, findings are presented in a format such as "*Enterprises that report more "bad" interactions with government institutions231 tended to be informal201 and experienced more severe shocks and stressors173 174"* In this example of a regression finding, the dependent variable refers to Indicator #231. The independent predictors for this variable are Indicators #201, #173 and #174. Interested readers may find the full results of the regressions in Annex IV by searching for the dependent variable indicator number. In some cases, as you see in the above example, two indicators #173 and #174 are used to measure the same variable i.e. severity of shocks and stressors. When pairwise influences, conclusions or interpretations are interpreted by experts without statistical evidence, the notation EXPERT or WORKSHOP is used to denote the source of evidence, connection, or claim that is made. While it is very difficult to avoid bias in research, the technique of cross-validation of both quantitative and qualitative data helps to triangulate findings to filter and remove bias. Further, by citing the sources of data, we hope to provide the greatest level of transparency in reporting the findings of this report.

STEP 4. RUN SYSTEMS-LEVEL ANALYSIS TO STUDY COMPLEX RELATIONSHIPS.
The team conducted systems-level analysis using two methods (1) matrix multiplication applied to classification (MICMAC) technique to identify the influence and dependence of each variable on the rest of the system (2) network analysis to identify the betweenness centrality of each variable – or whether each factor represents a bridge (or critical node) to influencing other outcomes in the system. The variables which were highly interdependent and/or formed evident feedback loops were grouped into 9 dynamics which are the chapters of this Diagnostic report and analyzed in the main text below. The quantitative reports of the MICMAC and network analysis presented in Annex III. Structural Analysis.

STEP 5. STAKEHOLDER DISCUSSION AND INTERPRETATION OF RESULTS.
As a final step, the team facilitated 8 workshops with more than 90 experts presenting out the principal findings and to prompt dialogue on each of the factors. These outputs of these workshops were recorded, transcribed, and analyzed to add qualitative interpretation to the systems analysis findings.

MARKET SYSTEMS APPROACH

We define a market system to include all public organizations and private enterprises, including supporting services, that collaborate, coordinate, and compete to produce, trade, and consume products and services.[3] The team has adopted a market systems approach to understanding how the Honduran market system reacts to an opportunity, an external disruption, or engages a specific population group, including the poor, the disadvantaged or otherwise excluded. In other words, we are interested in a market system that is more competitive, resilient, and inclusive. There are several key elements and principles which are helpful to contextualize why a market systems approach is useful.

FIGURE 3. KEY ELEMENTS OR PRINCIPLES OF COMPLEX AND ADAPTIVE SYSTEMS

1. A system is more than the sum of its parts; it is the product of the interactions of its elements.	A systems analysis is focused on the interactions between different elements of the system. Each element is by itself limited and has a defined function. However, when the elements are brought together in a larger system, these elements collectively can produce much larger results. For example, a university may research and develop a new technology, but an enterprise can commercialize that technology to generate thousands of jobs for Honduran workers.
2. The order and composition of the	Each part of the market system has a specific function related to overall system performance. If one part does not function well this can have a binding effect limiting overall performance. At the same time, if these parts change, this can

[3] The United States Agency for International Development. (2014). A Framework for Inclusive Market System Development. Retrieved from: https://www.marketlinks.org/resources/framework-inclusive-market-system-development

elements affects the system performance.	have an outsized effect on system performance. We identify the elements – or so-called leverage points – that if changed will change the whole system.
3. Systems are dynamic, constantly changing and evolving.	Systems are constantly changing due to context factors – social, technological, environmental, etc. – as well as internal dynamics which are driving change. This analysis identifies nine internal dynamics which are driving change in the market system. In addition, we have compared the results of this 2020 Diagnostic with the 2018 Diagnostic to identify which factors have changed and which have not.
4. Systems are interrelated with other systems.	Market systems constantly interact with other non-market systems. In multiple points in this analysis a variable was identified related to a non-market system, whether democracy and governance, education, or social systems. In these cases, these variables were not directly measured by the Diagnostic, so only qualitative or secondary data sources are presented where relevant for interpretation.
5. Systems maintain themselves through stability and feedback.	Systems are resistant to change because there are always parties interested in preserving the status quo. In workshops, many stakeholders identified the issues identified as many of the same ones discussed the past decade. A systems analysis is intended to help to identify the feedback that maintain the status quo and to help point to areas to leverage change for these seeming intractable issues.

DIAGNOSTIC FINDINGS

The Diagnostic measured 43 variables through 112 indicators. The ranking of these variables based on the structure analysis is presented in the table below. These variables are ranked based on:

- **Influence** which measures variables that have the greatest effects on the evolution of the Honduras market system. Influence considers both direct effects and indirect effects measured by matrix multiplication (MICMAC). The higher the influence the more important the variable.
- **Dependence** which measures variables which are most sensitive to changes in other variables. In other words, changes in them depend significantly on changes in other variables. Many influential variables may be influential but highly dependent on variables, which makes them less likely candidates for direct intervention because their long-term performance is defined by other variables.
- **Centrality (betweenness)** which is a different network perspective on influence that measures the centrality of a variable based on if it lies on the shortest path between all other variables. These are critical nodes in the system because influence and dependence flows through these variables.
- **Change over time** which is a context measure added to consider whether the variable has changed between 2018 and 2020. The degree of change signals whether change processes that involve this variable may be fast-moving, which tend to involve more micro-level change processes, or slow-moving, which tend to involve more macro-level change processes which take place over long-term.

The table below ranks these 43 variables based on their degree of influence, level of dependance and centrality in the system. Based on these measures, variables are characterized as leverage points, critical or relay, borderline, autonomous or dependent variables according to the structural analysis.

- **Leverage point variables** are places to intervene in the system. Leverage points determine how the Honduran market system evolves due to their strong influence and low dependence on other variables.
- **Critical or relay variables** are highly influential but also highly dependent on other variables in the system which makes them both volatile but also important for how the system performs.
- **Borderline variables** have moderate influence and moderate dependence on other variables in the system. These variables may function as leverage points, critical or relay variables in certain contexts or they may function as autonomous or dependent variables in other contexts.
- **Autonomous variables** have low influence and low dependence on other variables in the system. They are relatively disconnected and tend to be considered as context factors.

- **Dependent variables** are variables which have low influence but high dependence on other variables in the system. These variables will change with leverage points and critical or relay variables. These variables are often the best measures for if the system has changed given their high dependence.

Note these are not normative rankings based on what variables are more important or valuable. For example, in designing this Diagnostic, we were concerned in job creation and maintenance as our primary goal. This variable however ranks among the lowest as a dependent variable. The purpose of the ranking is to advise policymakers, academics, or business leaders where an intervention or change would have an outsized effect on changing other variables – and the overall performance of the market system.

FIGURE 4. Ranking of variables based on influence, dependence, and centrality measures (variable number and name)		Influence High ● Low ●	Dependence High ● Low ●	Centrality High ● Low ●	2018 - 2020 Improved ▲ Declined ▼ The same =	Categorization of Variable
1	1 Rule of law	●	●	●	=	Leverage Point
2	4 Corruption	●	●	●	▼	Leverage Point
3	2 Government administration (quality)	●	●	●	=	Leverage Point
4	13 Fair competition in sector	●	●	●	Not available	Leverage Point
5	6 Democracy and governance	●	●	●	Not available	Leverage Point
6	11 Public services and infrastructure	●	●	●	Not available	Leverage Point
7	23 Enterprise digitalization	●	●	●	=	Leverage Point
8	22 Information use	●	●	●	▲	Leverage Point
9	15 Dispute resolution	●	●	●	Not available	Leverage Point
10	21 Entrepreneurship and innovation	●	●	●	Not available	Critical or relay
11	40 Workforce skills	●	●	●	Not available	Critical or relay
12	18 Market access	●	●	●	=	Critical or relay
13	30 Enterprise survival and growth	●	●	●	▼	Critical or relay
14	31 Sector situation / competitiveness	●	●	●	Not available	Critical or relay
15	17 Enterprise linkages / collaboration	●	●	●	=	Critical or relay
16	20 Support services	●	●	●	=	Critical or relay
17	5 Crime and theft	●	●	●	Not available	Borderline
18	35 Inclusive access to jobs	●	●	●	▼	Borderline
19	39 Discrimination	●	●	●	Not available	Borderline
20	36 Household incomes	●	●	●	Not available	Borderline
21	41 Education	●	●	●	Not available	Borderline
22	25 Recovery from shocks and stressors	●	●	●	▼	Borderline
23	33 Investment in productive capacities	●	●	●	▼	Borderline

24	16 Confidence in other enterprises				Not available	Borderline
25	9 Tax burden				=	Borderline
26	14 Pricing power				=	Borderline
27	19 Access to finance				▼	Borderline
28	26 Negative enterprise coping behaviors				Not available	Autonomous
29	41 Remittances				▲	Autonomous
30	24 Severity shocks and stressors				▼	Autonomous
31	12 Informal sector competition				Not available	Autonomous
32	41External migration				Not available	Autonomous
33	3 Reforms to enabling environment				▼	Autonomous
34	28 Climate change and weather volatility				Not available	Autonomous
35	29 Market price volatility				▼	Autonomous
36	10 Government expenditure				Not available	Autonomous
37	38 Equal pay in sector				Not available	Autonomous
38	37 Business ownership women & youth				Not available	Autonomous
39	34 Job creation and maintenance				▼	Dependent
40	8 Taxes				Not available	Dependent
41	7 Informality				▼	Dependent
42	32 Business confidence				▼	Dependent
43	27 Business resilience capacities				Not available	Dependent

In the sections below we group the above variables and pairwise influences which are highly interlinked. This grouping enables an analysis and interpretation of the broader causal "story" behind how these groups of variables interact together to influence a broader trend in the market system.

I. INSTITUTIONS AND RULE OF LAW

KEY FINDINGS

The strength of institutions and rule of law is at the root of many of the dynamics observed in Honduran market systems. Enterprises report poor quality administration and excessive red tape in day-to-day interactions when obtaining licenses and permits, trading across borders, paying taxes, etc. These interactions constitute significant obstacles to enterprise growth and recovery from disruptions, such as COVID-19. Resolving the administrative burden is not considered a simple technical fix but requiring deeper changes in the reform process itself to create a more conducive business enabling environment evidenced by Honduras steady decline in World Bank Doing Business rankings from 105 in 2017 to 115 in 2018 to 121 in 2019 to 133 in 2020. This difficulty to implement reforms reflects challenges related to democracy and governance that were not measured in this Diagnostic but discussed in brief at the end of this dynamic.

#1 RULE OF LAW

Ranking #1 Influence ● Dependence ● Centrality ● Change =

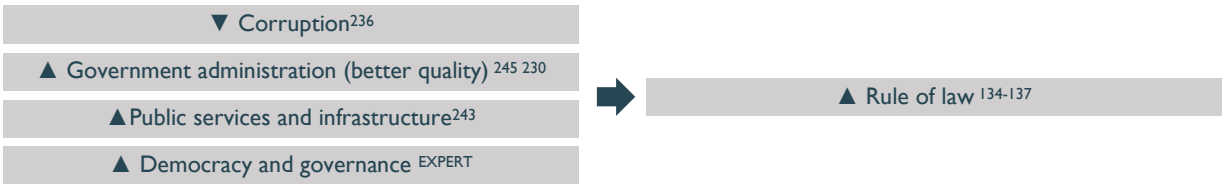
- Rule of law considers the system of laws, institutions and norms that ensure accountability to the law, protection of fundamental rights, the fair and efficient operation of government, and accessible justice. REF4
- The measure used for rule of law in the Diagnostic is the degree of confidence enterprises had in local and national government, police officers and the judicial system. More than half of Honduran enterprises surveyed expressed no confidence in government institutions and the rule of law in Honduras. 134 to 137
- Honduras has the fourth lowest ranking for rule of law in Latin America and the Caribbean surpassing only Nicaragua, Bolivia, and Venezuela in the World Justice Project Rule of Law Index. REF5
- While institutions and rule of law are multidimensional concepts, there a positive correlation between strength of institutions and the rule of law and the degree of economic growth. REF6

FIGURE 5. PERCENTAGE OF ENTERPRISES THAT HAVE CONFIDENCE IN GOVERNMENT INSTITUTIONS.

More than half of enterprises have no confidence in government institutions and the rule of law in Honduras.

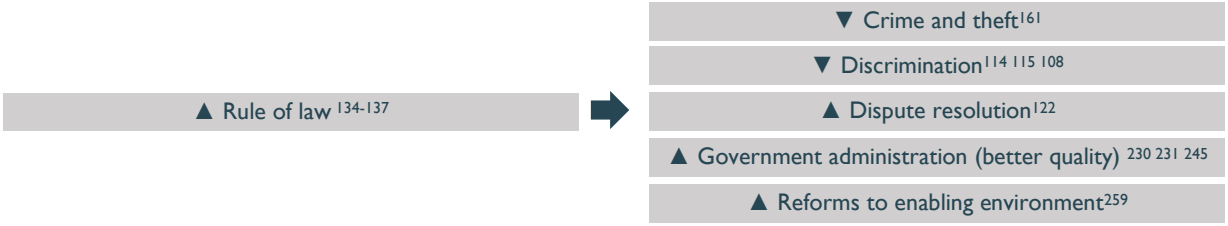
- The strength of Honduran rule of law[134-136] depends on the levels of corruption,[236] the quality of public services and infrastructure[245 230] and the quality of democracy and governance. REF7 EXPERT

FIGURE 6. FACTORS THE STRENGTH OF RULE OF LAW IS DEPENDENT ON



- Our analysis shows that a stronger rule of law[134-137] decreases crime and theft, [161] reduces discrimination, [114 115 108] improves dispute resolution,[122] and improves quality of government administration. [245 230]
- Stronger rule of law[134-137] also supports reforms and improvements to the business enabling environment[259] which in turn improves the quality of government administration. [230 231 245]

FIGURE 7. FACTORS INFLUENCED BY THE STRENGTH OF RULE OF LAW



[4] World Justice Project. (2020). Rule of law index. Washington, D.C: World Justice Project.
[5] Ibid.
[6] Coase, R. (1998). The New Institutional Economics. The American Economic Review, 88(2), 72-74.
[7] The Diagnostic did not directly measure the quality of democracy and governance, but in workshops with the private sector this factor emerged as a determinant and was subsequently validated by experts.

- Rule of law is also identified as having a significant impact on foreign investment into Honduras as foreign investors are concerned about protection of contracts and property. WORKSHOPS This affects whether enterprises can access foreign capital, which was qualified by Honduran enterprises as type of financing that had the most significant contribution to their businesses in the past year (see access to finance). [261]

That is, we have a series of laws that say one thing on paper, but in practice it is totally unrelated to what is written or established. – Transport company owner, La Ceiba

FIGURE 8. CHANGE IN THE RULE OF LAW BETWEEN 2018 AND 2020

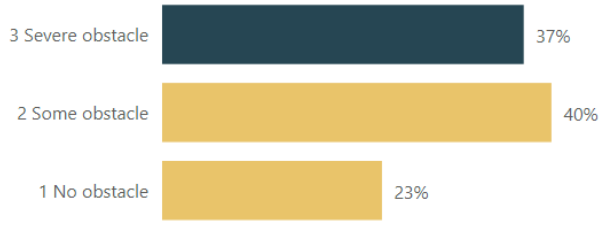
The World Justice Project (WJP) Rule of Law Index [REF8] is used to measure the change in Rule of Law from 2018 to 2020. In 2018 Honduras had a score of .40 out of 1.00 on the index ranking 103 out of 113 countries. In 2020, Honduras had a score of 0.40 out of 1.00 on the index ranking 116 out of 128 countries. Based on this measure, there has been no change in the Rule of Law in Honduras between 2018 and 2020.

#2 GOVERNMENT ADMINISTRATION

Ranking #3 Influence Dependence Centrality Change

- The quality of government administration considers the excess time, lengthy procedures, relative costs, and discretionary application of rules related to obtaining permits and licenses from public institutions.
- In this regard, 77% of Honduran enterprises consider licenses and permits as an obstacle to their business and 37% of enterprises considered licenses and permits as a major obstacle to their business.[253]

FIGURE 9. PERCENTAGE OF ENTERPRISES THAT REPORT THE LICENSES AND PERMITS AS A MAJOR OBSTACLE.



37% of enterprises identified business licenses and permits as a major obstacle to the growth of their enterprise.

- Enterprises reported three interactions on average with Honduran government institutions in 2020.
- Enterprises characterized their interactions with Honduran government institution as "good" "normal" or "bad." 41% of interactions were qualified as "good", 41% as "normal" while 18% were qualified as "bad."
- A Net Promoter Score is calculated by the percentage of enterprises that responded "good" subtracted by the percentage of enterprises that responded "bad" to government interactions. The overall Net Promoter Score of Honduran government administration is +22% (on scale of -100% to +100%).
- The Honduran government institutions rated most highly are the Secretary of Finance (SEFIN), Secretary of Health of Honduras (SESAL) and Center for Export Procedures (Centrex).
- The institutions rated the lowest are Municipalities – Construction Permits, Honduran Institute of Social Security (IHSS), Ministry of Environment (MiAmbiente) and National Electric Energy Company (ENEE).

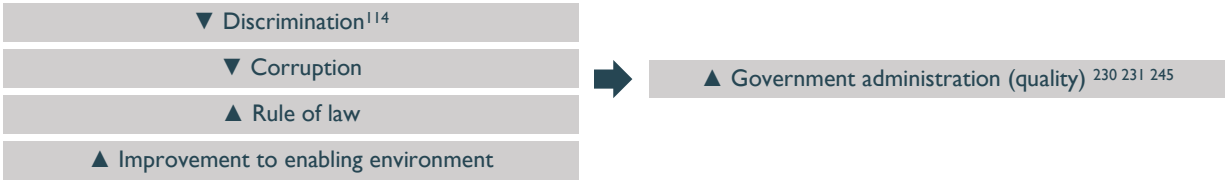
[8] World Justice Project. (2020). Rule of law index. Washington, D.C: World Justice Project.

FIGURE 10. PERCENTAGE OF ENTERPRISES THAT REPORTED INTERACTIONS WITH GOVERNMENT INSTITUTIONS BY QUALITY OF INTERACTION. RANKING BASED ON NET PROMOTER SCORE (NPS) CALCULATION.

Government Institution	% Used	% Good	% Normal	% Bad	NPS	Rank
Center for Export Procedures (Centrex)	8%	58%	35%	7%	51%	1
Secretariat of Health of Honduras (SESAL)	16%	47%	42%	10%	37%	2
Secretary of Finance (SEFIN)	12%	44%	45%	10%	34%	3
Municipalities – Operating Permits	61%	43%	41%	15%	28%	4
Customs	22%	44%	39%	17%	27%	5
Property Institute (IP)	18%	42%	44%	15%	27%	6
Secretariat Economic Development (SDE)	6%	35%	57%	9%	26%	7
Secretariat Labor and Social Security (STSS)	21%	37%	50%	13%	24%	8
Tax Administration Service (SAR)	76%	38%	46%	16%	22%	9
Health Regulation Agency (ARSA)	20%	37%	46%	16%	21%	10
Honduran Institute of Social Security (IHSS)	25%	33%	48%	19%	13%	11
Municipalities – Construction Permits	11%	37%	39%	24%	12%	12
Ministry of Environment (MiAmbiente)	13%	34%	42%	24%	10%	13
National Electric Energy Company (ENEE)	51%	33%	37%	30%	3%	14

- The quality of government administration[230 231 245] is dependent on levels of discrimination,[114] frequency of corruption,[237] the strength rule of law,[134] and reforms the enabling environment.[259]
- Enterprises also reported an absence of communication channels or mechanisms to appeal or contest "bad" interactions with Honduran government institutions. WORKSHOPS

FIGURE 11. FACTORS THE QUALITY OF GOVERNMENT ADMINISTRATION IS DEPENDENT ON



My company was growing until the government came and said we had to have a permit. I went to the office in charge of getting the permit. Two months waiting and the person in charge of the permits never showed-up.
– Woman agricultural business owner, Tegucigalpa

- Enterprises that reported more "good" interactions[230] had increased access to finance,[192] increased access to support services,[200] were more entrepreneurial and innovated more[312] and were more confident in their growth in next year[153] than enterprises which reported fewer "good" interactions.
- Enterprises that reported more "good" interactions responded favorably in terms of confidence in the police, judiciary, local and national institutions – a measure used for strength of rule of law. [134-137]

FIGURE 12. FACTORS INFLUENCED BY THE QUALITY OF GOVERNMENT ADMINISTRATION "GOOD"

▲ Government administration (better quality) [230]

- ▲ Access to finance[192]
- ▲ Institutions and rule of law[134-137]
- ▲ Enterprise confidence[153]
- ▲ Entrepreneurship and innovation[312]
- ▲ Support services[200]

- Enterprises that reported more "bad" interactions with government institutions tended to be informal[201] and experienced more severe shocks and stressors[173 174] than enterprises which had fewer "bad" interactions.

FIGURE 13. FACTORS INFLUENCED BY THE QUALITY OF GOVERNMENT ADMINISTRATION "BAD"

▼ Government administration (quality) [231]

- ▲ Informality[201]
- ▲ Severity of shocks and stressors[173 174]

"In terms of fines and penalties, there is discretionality in customs valuation and classification. They use this discretionality to apply excessive fines and penalties to companies." – Woman busines owner, San Pedro Sula

FIGURE 14. CHANGE IN QUALITY OF GOVERNMENT ADMINISTRATION BETWEEN 2018 AND 2020

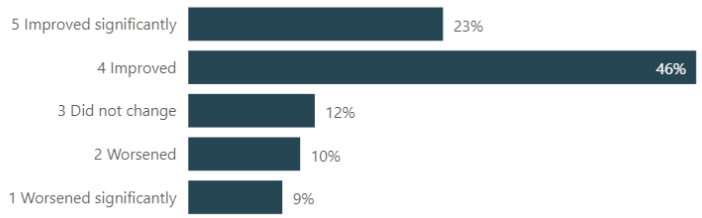
In 2018, Honduran enterprises interacted with on average 5 government institutions characterizing 45% of these interactions as "good," 33% as "normal," and 22% as bad. In 2018, Honduran enterprises interacted with on average 4 government institutions characterizing 41% of these interactions as "good," 41% as "normal," and 18% as bad. Based on these measures, we do not interpret a significant change in the quality of government administration between 2018 and 2020.

#3 REFORMS TO ENABLING ENVIRONMENT

Ranking #33 Influence Dependence Centrality Change

- Despite the limited confidence in Honduran government institutions, enterprises responded favorably that the business enabling environment in Honduras had improved prior to the COVID-19 crisis. [259]
- Honduras's ranking in World Bank's Doing Business Report had however deteriorated from 115 in 2018 to 121 in 2019, to 133 in 2020. The only reforms identified by World Bank Doing Business Report for Honduras for 2020 is the reduction in notary fees for articles of incorporation. [REF9]

FIGURE 15. PERCENTAGE OF ENTERPRISES THAT REPORT THE BUSINESS ENABLING ENVIRONMENT HAS IMPROVED (PRIOR TO THE COVID-19 CRISES).



Enterprises reported that prior to COVID-19 the business enabling environment had improved.

- We identified that reforms to the enabling environment[259] is dependent on the strength of rule of law. [137]

[9]World Bank Group. (2020) Economy Profile: Honduras Doing Business 2020.

- Enterprises also identified the need for greater representation in decision-making in the economic policy process so that government was responsive to the public interest in reform as well as greater political will on the part of elected officials to take actions on issues which affect the private sector. WORKSHOPS

To have a more inclusive market system, you have to create it. You have to work on it, and you have to create public policies that support economic inclusion." – Woman business owner, Choloma

FIGURE 16. CHANGE IN REFORMS TO ENABLING ENVIRONMENT BETWEEN 2018 AND 2020

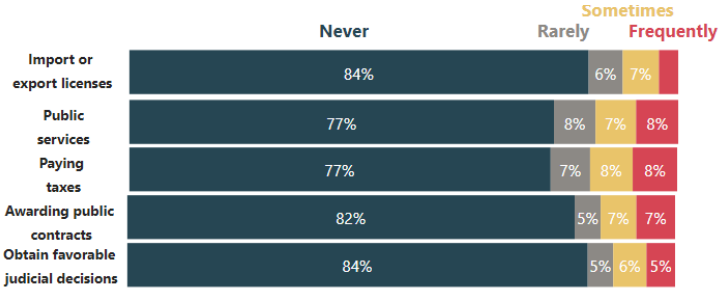
The World Bank Doing Business Report [REF10] is used to measure Reforms to the Enabling Environment from 2018 to 2020. In 2018 Honduras had a score of 58.46 out of 100 on the index ranking 115 out of 190 countries. In 2020 Honduras had a score of 56.30 out of 100 on the index ranking 133 out of 190 countries. Based on this measure, we determine there is a worsening of the business enabling environment between 2018 and 2020.

#4 CORRUPTION

Ranking #2 Influence ● Dependence ● Centrality ● Change ▼

- Corruption was measured by whether enterprises reported that making undocumented payments and/or bribes to public officials was frequent in their area related to obtaining import and export licenses, access to public services, paying taxes, awarding public contracts and/or obtaining favorable judicial decisions.
- 14% of enterprises reported that making undocumented payments and/or bribes was *frequent* while 31% of enterprises reported that any form of corruption happened rarely, sometimes, or frequently.
- Honduras ranks 157 out of 180 countries in Transparency International's Corruption Index with a score of 24 out of 100 (out of a scale where 0 is highly corrupt and 100 is very clean – the average global score is 43). Honduras declined by two points in 2020 to reach a new low on the index. [REF 11]

FIGURE 17. PERCENTAGE OF ENTERPRISES THAT REPORT THAT IN THEIR GEOGRAPHIC AREA, THAT IN GENERAL TERMS – NOT SPECIFIC TO THEIR ENTERPRISE – ENTERPRISES MAKE UNDOCUMENTED PAYMENTS OR BRIBES.



Enterprises reported undocumented payments or bribes were most frequently observed in public services and while paying taxes.

- Of the metrics used in the Diagnostic, corruption is primarily dependent on mechanisms for dispute resolution.[122] Approximately half, or 49% of enterprises agreed that there existed effective resolution mechanisms to manage dispute and conflict whether through mediation, arbitration, etc. [122]
- In workshops, other factors were identified that influenced corruption. These include democracy and governance, meritocracy in the civil service, constraints on government powers, e-government and simplification, privileged/elite groups, and organized crime and gangs. WORKSHOPS

[10]World Bank Group. (2020) Economy Profile: Honduras Doing Business 2020.
[11] Transparency International. (2021). Corruption Perceptions Index 2020.

- The higher the levels of corruption, the less confidence in rule of law[134-137] and the more likely enterprises are to experience "bad" interactions with public institutions. [230 231 245]

FIGURE 18. FACTORS INFLUENCED BY CORRUPTION

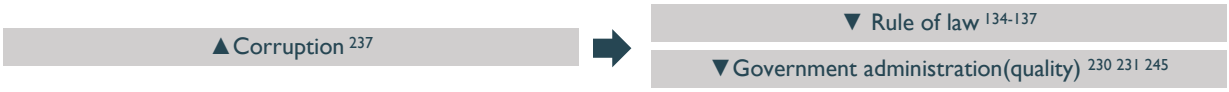


FIGURE 19. CHANGE IN LEVELS OF CORRUPTION BETWEEN 2018 AND 2020

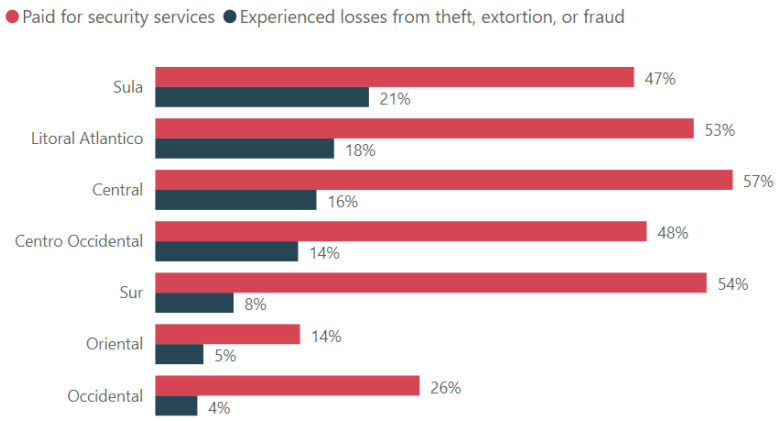
Transparency International's Corruption Index is used to measure Corruption from 2018 to 2020. In 2018, Honduras had a score of 29 out of 100 on the index ranking 132 out of 180 countries. In 2020 Honduras had a score of 24 out of 100 on the index ranking 157 out of 180 countries. Based on this measure, corruption worsened from 2018 to 2020.

#5 CRIME AND THEFT

Ranking #17 Influence ● Dependence ● Centrality ● Change Not available

- 50% of Honduran enterprises pay for security services[247] while more than 14% of enterprises experienced losses from theft, extortion, or fraud in 2020. [248] These rates varied significantly by region with the Sula Valley and Atlantic Coast reporting the highest frequency of losses from theft, extortion, or fraud.

FIGURE 20. PERCENTAGE OF ENTERPRISES THAT PAID FOR SECURITY SERVICES AND EXPERIENCED LOSSES FROM THEFT, EXTORTION OR FRAUD IN 2020 BY GEOGRAPHIC REGION



Honduran enterprises pay for security services and with losses from theft, extortion, and fraud.

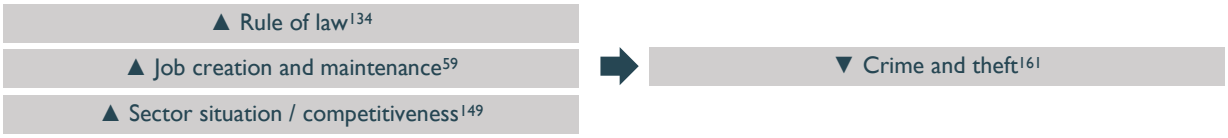
- While homicide rates fell from 84 per 100,000 residents in 2011 to 40 per 100,000 residents in 2018, Honduras still has the fourth highest rate in the world, ahead of El Salvador, Jamaica, and Lesotho. [REF12] Interpersonal violence is the third highest cause of death in Honduras behind heart disease and stroke.[13]
- Honduras's socio-political situation and levels of violence has reportedly perpetuated an image abroad as an unstable and dangerous country which has significantly decreased numbers of foreign visitors and investment in Honduras. This negative image is said to be unfairly perpetuated by local media. [WORKSHOPS]

Many enterprises in our area are affected by extortion, especially micro and small enterprises. We know it is one of the most serious problems we have. - Enterprise owners, Tegucigalpa

- Crime and theft[161] is dependent on rule of law,[134] job creation and maintenance,[59] and sector situation and competitiveness.[149]

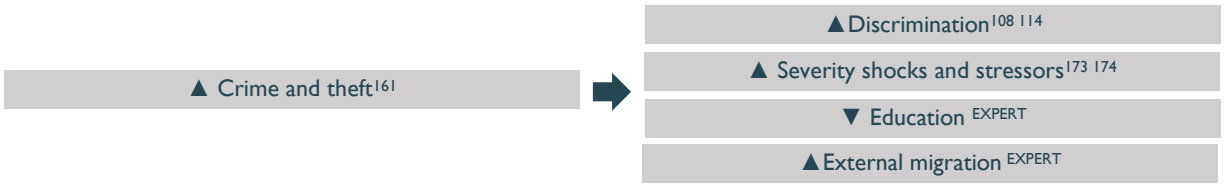
[12] UN Office on Drugs and Crime's International Homicide Statistics. Retrieved from https://data.worldbank.org/.
[13] Institute for Health Metrics and Evaluation. Retrieved from http://www.healthdata.org/honduras.

FIGURE 21. FACTORS CRIME AND THEFT IS DEPENDENT ON



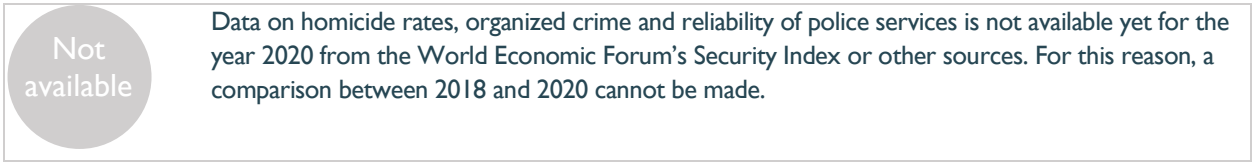
- Crime and theft[161] influence discrimination,[108 114] the severity of shocks and stressors experienced by enterprises,[173 174] levels of education, EXPERT and external migration. EXPERT

FIGURE 22. FACTORS INFLUENCED BY CRIME AND THEFT



- It is considered that high rates of crime and violence, pressure from gangs, a lack of jobs, and family disintegration are risk factors for Honduran youth. Trauma from abuse and violence leads to behavioral and substance use disorders, long-term health issues, and reduced educational outcomes. EXPERTS

FIGURE 23. CHANGE IN CRIME AND THEFT BETWEEN 2018 AND 2020



#6 DEMOCRACY AND GOVERNANCE

Ranking #5 Influence ○ Dependence ● Centrality ○ Change Not available

- The factor of democracy and governance was identified as a critical determinant of institutions and rule of law by stakeholders. In general, there is evidence that improvements in the standard of living and inclusive economic development enhances democracy and governance. Similarly, higher levels of education and reduced gender-based disparities are associated with more democratic societies. REF14

FIGURE 24. FACTORS DEMOCRACY AND GOVERNANCE IS DEPENDENT ON

- Democracy and governance are the principal determinants of rule of law based on expert opinions. EXPERT

FIGURE 25. FACTORS INFLUENCED BY DEMOCRACY AND GOVERNANCE

[14] Barro, Robert J. 1999. Determinants of democracy. Journal of Political Economy 107(S6): 158-183.

FIGURE 26. DIVING DEEPER INTO DEMOCRACY AND GOVERNANCE

The factors and dynamics related to democracy and governance are beyond the scope of this Diagnostic. However, in stakeholder workshops, there were significant qualitative findings that are validated with secondary data sources and indices that track important democracy and governance indicators in Honduras:

Electoral processes

- The quality of democratic electoral processes was identified as impacting the quality of Honduran democracy and perceived legitimacy by Honduran citizens of its government institutions. [WORKSHOPS] With respect to lawful elections, the World Justice Project Rule of Law Index ranks Honduras 124 out of 128 countries globally under the criterion of the extent to which the transition of power is subject to the rule of law. [WJP]

Source: World Justice Project. (2020). Rule of law index. Washington, D.C: World Justice Project.

Meritocracy in civil service

- Private sector experts identified the importance of meritocracy in civil service, with civil servants recruited and promoted based on merit and not their political affiliation as critical to stronger institutions and rule of law. [WORKSHOPS] Increased independence of the civil service from executive influence was considered to foster trust in government institutions and reduce opportunities for corruption in public administration. [WORKSHOPS]

Constraints on government powers

- The absence of constraints on government powers was identified both in workshops and in rankings in the World Justice Project Rule of Law Index for Honduras in which Honduras scores -
  - 113 out of 128 countries: Government powers are effectively limited by judiciary,
  - 123 out of 128 countries: Government powers are effectively limited by independent auditing review,
  - 125 out of 128 countries: Government officials are sanctioned for misconduct.

Source: World Justice Project. (2020). Rule of law index. Washington, D.C: World Justice Project.

E-government and simplification

- The complexity and use of manual, paper-based administrative processes is reported to provide opportunities for corruption and discretionary application of the rules by public officials. [WORKSHOPS] The digitalization and standardization of government procedures as well as interoperability between government institutions were noted as significant factors which would improve institutions and rule of law in Honduras. [WORKSHOPS] Honduras ranks third to last in the Americas for e-government and 138 out of 193 countries globally. [UN]

Source: UN E-Government Knowledgebase. Retrieved from https://publicadministration.un.org/egovkb/en-us/data-center

Privileged and elite groups

- There is a hypothesized dynamic related to the influence on privileged and elite interests on institutions and the rule of law. The hypothesis is the stronger the influence of the elite or privileged interests, the more receptive politicians are to those groups and the more exceptions in policies and laws to benefit those groups. This preference for privileged or elite groups at the expense of the public interest has a distorting effect on reforms and the quality of public administration, as well as on public faith in institutions and the rule of law. [WORKSHOPS]

Organized crime and gangs

- Honduras is identified as a drug trafficking transit nation between South America and Mexico in which criminal groups have a strong influence on corruption in the political system. [WORKSHOPS] Through business extortion, organized crime constitutes one of the most severe stressors reported by enterprises.[166] Organized crime related business activities, such as money laundering, similarly distort economic activity. [WORKSHOPS]

Source: Honduras Country Profile. Insight Crime. Retrieved from: https://insightcrime.org/honduras-organized-crime-news/

FIGURE 27. CHANGE IN DEMOCRACY AND GOVERNANCE BETWEEN 2018 AND 2020

Democracy and governance consider multiple factors which are beyond the scope of this Diagnostic. For this reason, no measure of change is provided in this Diagnostic.

II. TAXES AND PUBLIC EXPENDITURES

KEY FINDINGS

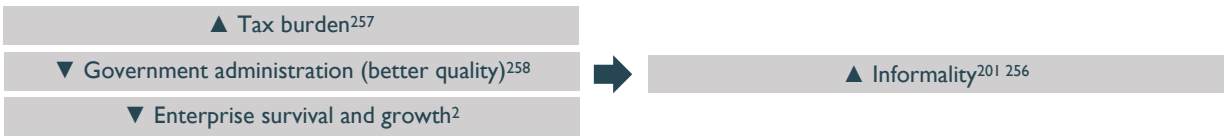
Enterprises report the tax burden in Honduras as a severe obstacle to their growth. The high tax burden contributes to informality which creates unfair competitive pressures for formal enterprises and harms the ability of formal enterprises to grow. The tax system is by international standards overly complex for enterprises to comply with which is exacerbated by fines, surcharges, and interest that add to the tax burden. The difficulty in registration presents one additional obstacle to enterprise formalization. At the same time, informality is symptomatic of more structural issues in the Honduran economy. Informality is linked to high levels of invisible underemployment in Honduras in which individuals tend to be self-employed informally when they cannot find jobs in the formal sector. Stakeholders also express the sentiment that the perceived low quality of government expenditure and little perceived benefit from paying taxes erodes enterprise confidence in the formal market system and negatively influences their decision to formalize.

#7 INFORMALITY

Ranking #41 Influence ● Dependence ● Centrality ● Change ▼

- Honduras has one of the highest levels of informal employment as a percentage of total non-agricultural employment of any country in Latin America and the Caribbean. According to International Labor Organization (ILO) data dated 2017, approximately 80.6% of workers are informally employed. REF15
- The principal determinants for why enterprises are informal[201] were (1) the high tax burden on formal enterprise which discourages formalization,[257] and (2) the complexity of business registration.[258]
- In addition, more newly established enterprises reported being informal.[2] It is understood that start-up or younger enterprises face difficulties complying with tax requirements. [201]

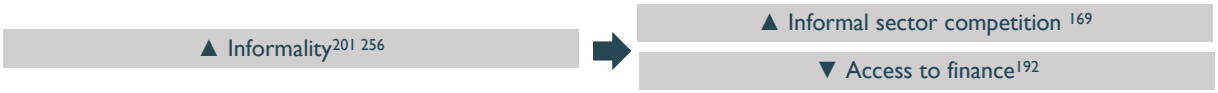
FIGURE 28. FACTORS INFORMALITY IS DEPENDENT ON



There is no grace period to be able to develop your business. You are already being taxed from the beginning and you have not even developed as a company. – Transport company owner, Tegucigalpa

- The higher the levels of informality in the market, [201 256] the more competition formal enterprises face from informal enterprises which is identified as a severe obstacle to their business. [169]
- Informal enterprises report difficulty in accessing finance and/or access lower quality finance than formal enterprises. Being informal therefore constitutes a barrier to accessing services and markets. [192]

FIGURE 29. FACTORS INFLUENCED BY INFORMALITY



- Informality is an indicator for how well enterprises perceive the formal system is working. High levels of informality can be interpreted as enterprises choosing not to participate in the formal system. WORKSHOPS

[15] International Labor Organization. ILOSTAT. Retrieved from: https://ilostat.ilo.org/topics/informality/

FIGURE 30. CHANGE IN INFORMALITY BETWEEN 2018 AND 2020

There are no recent official measures of informality in Honduras based on publicly available data. As a proxy, data on from the Permanent Household Survey by the National Institute of Statistics (INE) measures the percentage of the workforce that is self-employed. Taking this as a proxy measure for levels of informality, 40.37% of the Honduran workforce was self-employed in 2018 compared to 45.04% in 2020. Based on this measure, we interpret that informality has worsened between 2018 and 2020.

#8 TAXES AND #9 TAX BURDEN

Taxes

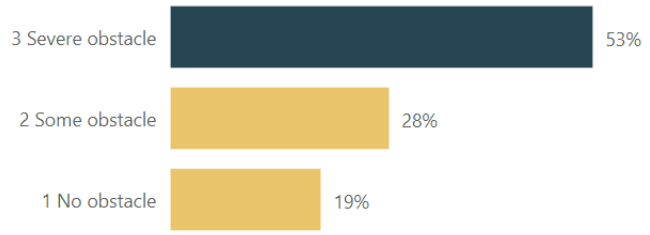
Ranking	#40	Influence	Dependence	Centrality	Change	Not available

Tax burden

Ranking	#25	Influence	Dependence	Centrality	Change

- 81% of enterprises reported the tax burden as an obstacle to their business, with 53% reporting the tax burden as a severe obstacle.[257]
- Honduras ranks 167 in terms of paying taxes in World Bank Doing Business Report 2020 with low scores in number of payments per year (59 payments in a year) and the tax post-filing index (35.1 out of 100). Honduras's overall paying tax score of 49.9 is below the Latin America & Caribbean average of 60.5.[REF16]
- Enterprises identified that it is not simply the tax rate but the complexity of paying taxes. This complexity can result in incorrect or late filings which leads to excess fines, surcharges, and interest. WORKSHOPS

FIGURE 31. PERCENTAGE OF ENTERPRISES THAT REPORT THE TAX BURDEN AS A SEVERE OBSTACLE.



More than half of enterprises identified the tax burden as a severe obstacle to their business. It should be noted that 76% of the enterprises surveyed reported paying taxes in 2020.

When people get into arrears, they stop paying. It is not that they do not want to pay, it is that one cannot afford to pay. With these levels of taxes, it is very difficult. – Woman business owner, Santa Rosa de Copan

FIGURE 32. CHANGE IN TAX BURDEN BETWEEN 2018 AND 2020

The World Bank Doing Business Report [REF17] is used to measure the Tax Burden from 2018 to 2020. In 2018 the total tax rate and contribution rate as a percentage of profit was 44.4%. In 2020 the total tax and contribution rate in Honduras was 39.1% of profits. At the same time, in 2018 Honduras had a score of 51.74 out of 100 on the sub-index of paying taxes ranking 164 out of 190 countries. In 2020, Honduras had a score of 49.9 out of 100 on the sub-index of paying taxes ranking 167 out of 190 countries. Based on these measures, the evidence is mixed, and we do not interpret a significant change between 2018 and 2020 in the tax burden.

[16] World Bank Group. (2020). Doing Business Report 2020 Economy Profile of Honduras.
[17] World Bank Group. (2020) Economy Profile: Honduras Doing Business 2020.

#10 GOVERNMENT EXPENDITURE

Ranking #36 Influence Dependence Centrality Change Not available

- Government expenditures is not a variable that was directly measured by the Diagnostic but was added by experts to explain the interactions between taxes and public services and infrastructure.
- The Central American Monetary Council identifies Honduran government expenditure as a 24% of GDP in 2019 – decomposed by 19% for current spending, 5% for capital spending. [REF18]
- Taxes are the principal source of fiscal revenues which finance government expenditures. While Honduran government debt has increased, Honduras has run smaller fiscal deficits recently. [REF19]

FIGURE 33. FACTORS GOVERNMENT EXPENDITURE IS DEPENDENT ON

▲ Taxes [EXPERT] → ▲ Government expenditure [EXPERT]

- At least part of government expenditure is to finance public services and infrastructure. [EXPERT]

FIGURE 34. FACTORS INFLUENCED BY GOVERNMENT EXPENDITURE

▲ Government expenditure [EXPERT] → ▲ Public services and infrastructure [EXPERT]; ▲ Education [EXPERT]

FIGURE 35. CHANGE IN GOVERNMENT EXPENDITURE BETWEEN 2018 AND 2020

Not available

Government expenditure was added to explain interactions between fiscal revenues and expenditures on infrastructure and education. According to the Central American Monetary Council, [REF20] Honduras had spent approximately $1.27 billion in capital expenditures in 2018, whereas as of November 2020, Honduras had spent $800 million in capital expenditures. Data on government expenditures on education was not available for 2020. For this reason, a complete comparison between 2018 and 2020 cannot yet be made.

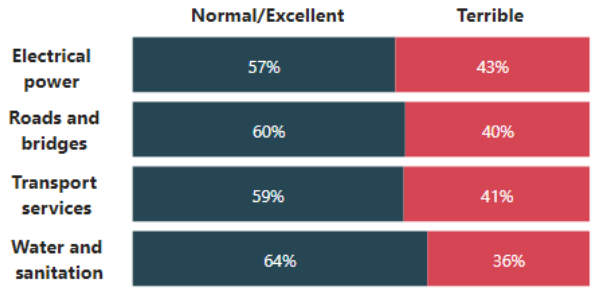
#11 PUBLIC SERVICES AND INFRASTRUCTURE

Ranking #6 Influence Dependence Centrality Change Not available

- The quality of Honduran infrastructure is measured by its roads, reliable electricity supply, water and sanitation and transport services which are key factors affecting competitiveness – with the poor quality of infrastructure constituting stressors for businesses that affect business continuity and growth.
- More than one third of Honduran enterprises surveyed rate the quality of infrastructure as terrible.[239 to 241] The quality of road infrastructure and electricity supply varies dramatically by region with the enterprises that are further from the country's T-shared transportation corridor reporting decreased quality.
- In the Global Competitiveness Report 2019 Honduras ranks 99 under the pillar for infrastructure lagging in the indicators for road connectivity, electricity access and the quality and reliability of water supply.[21]

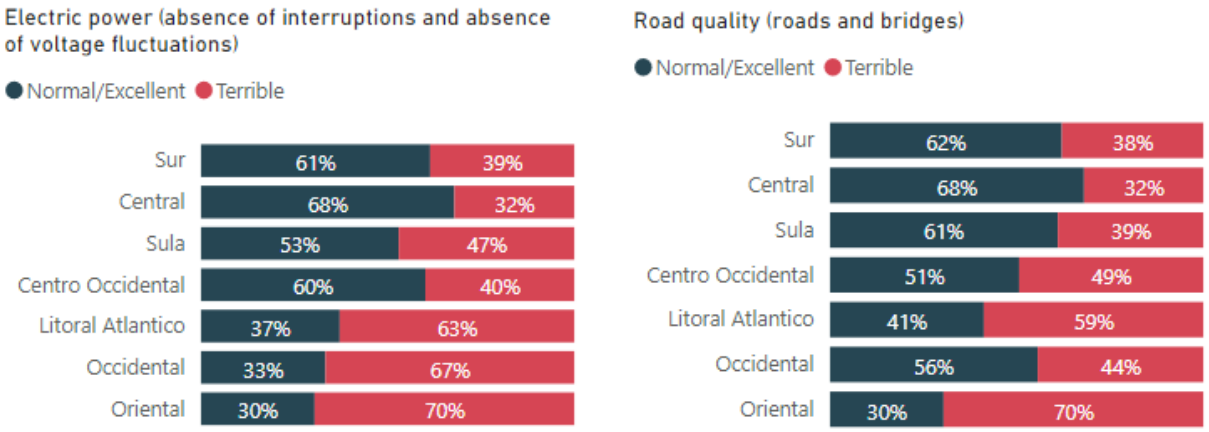
[18] Central American Monetary Council. Retrieved from http://www.secmca.org/.
[19] International Monetary Fund. (2020). World Economic Outlook.
[20] Central American Monetary Council. Retrieved from http://www.secmca.org/.
[21] World Economic Forum. (2019). The Global Competitiveness Report 2019.

FIGURE 36. PERCENTAGE OF ENTERPRISES THAT QUALIFY INFRASTRUCTURE AS NORMAL/EXCELLENT OR TERRIBLE



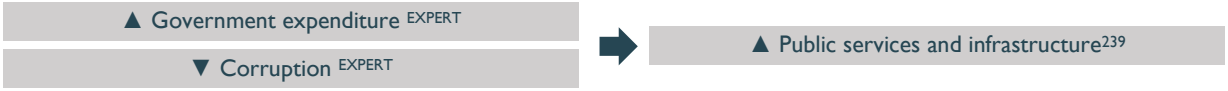
The quality of electrical power supply was worse compared to other types of infrastructure. The Atlantic Coast, Western and Eastern parts of Honduras have worse infrastructure.

FIGURE 37. PERCENTAGE OF ENTERPRISES THAT QUALIFY ELECTRICAL POWER AND ROADS AND BRIDGES AS NORMAL/EXCELLENT OR TERRIBLE BY GEOGRAPHIC ZONE OF HONDURAS



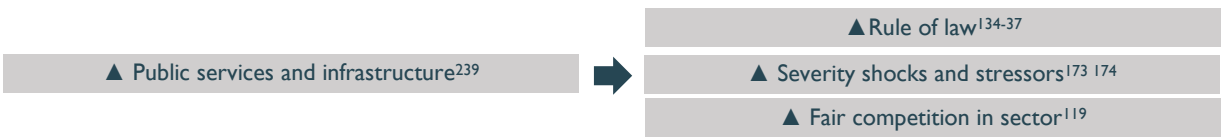
- The quality of public services and infrastructure[239 to 241] is dependent on levels of government expenditure EXPERT and degree of corruption EXPERT which affects the efficiency of government expenditure.
- Enterprises identified the difficulty of the Honduran government in efficiently making public expenditures in quality investments of infrastructure and public services. There is high perceived loss and waste in public expenditures which also deteriorates confidence in rule of law and government institutions. WORKSHOPS

FIGURE 38. FACTORS QUALITY OF INFRASTRUCTURE IS DEPENDENT ON



- The quality of public services and infrastructure[239] influences the strength of rule of law,[134-137] severity of shocks and stressors experienced,[173 174] and the degree of fair competition in the sector.[119]
- Infrastructure is considered to facilitate connectivity which permits more equitable competition between enterprises and enables access to alternative buyers and suppliers in the case of a shock. EXPERT

FIGURE 39. FACTORS INFLUENCED BY QUALITY OF INFRASTRUCTURE



- Participants identified the need for increased private sector investment to build, operate and own electricity transmission to complement public financing of the large investments required. WORKSHOPS

FIGURE 40. CHANGE IN PUBLIC SERVICES AND INFRASTRUCTURE BETWEEN 2018 AND 2020

Not available

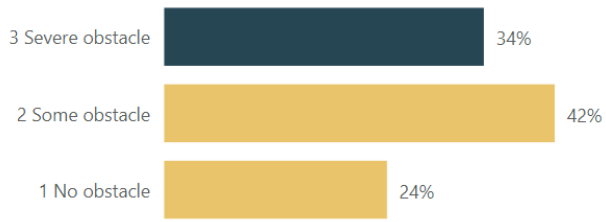
The variable public services and infrastructure and related indicators were added to the Diagnostic this year. Data on road, air and shipping connectivity is not yet available for the year 2020 from the World Economic Forum's Infrastructure Index or other secondary sources. For this reason, a comparison between 2018 and 2020 cannot be made.

#12 INFORMAL SECTOR COMPETITION

Ranking #31 Influence Dependence Centrality Change Not available

- Since informal enterprises do not pay taxes and tend to not comply with minimum wages, informal enterprises reportedly have advantage in cost structure which allows them to sell for less. WORKSHOPS
- Informal competition is an obstacle for 76% of enterprises; however, 34% reported informal competition as a severe obstacle to their business. [169]

FIGURE 41. PERCENTAGE OF ENTERPRISES THAT REPORT INFORMAL COMPETITION AS A SEVERE OBSTACLE.



Approximately one-third of enterprises identified competition from the informal sector as a severe obstacle to the growth of their enterprise.

- Enterprises that paid taxes were more than twice as likely than enterprises that did not pay taxes to report competition from informal enterprises as a severe obstacle to their businesses. [257]

FIGURE 42. FACTORS INFORMAL SECTOR COMPETITION IS DEPENDENT ON

▲ Informality[201] [256] → ▲ Informal sector competition[257]

- Enterprises that reported informal competition as severe tended to disagree that competition in their sector was fair compared to other enterprises which was neutral on fairness of competition. [119] In other words, informality is perceived to create an unfair advantage for informal enterprises.
- Informal competition is also considered a recurrent stressor to enterprises. 25.7% of enterprises reported being affected by informal competition as a stressor in 2020 to the detriment of their business. [174]
- As noted in the resilience dynamic below, the more shocks and stressors experienced, the less likely the enterprise is to survive and grow. Indirectly, informal competition can harm growth and job creation.

FIGURE 43. FACTORS INFLUENCED BY INFORMAL SECTOR COMPETITION

▲ Informal sector competition[257] → ▼ Fair competition in sector[119]; ▲ Severity of shocks and stressors[174]

How many people live in the informal economy and they are our competition. They don't have all the expenses that we formally constituted business have in paying taxes. – Transport company owner, La Ceiba

FIGURE 44. CHANGE IN INFORMAL COMPETITION BETWEEN 2018 AND 2020

Not available

The variable informal competition was added to the Diagnostic this year. For this reason, a comparison between 2018 and 2020 cannot be made.

III. COMPETITION AND COOPERATION

KEY FINDINGS

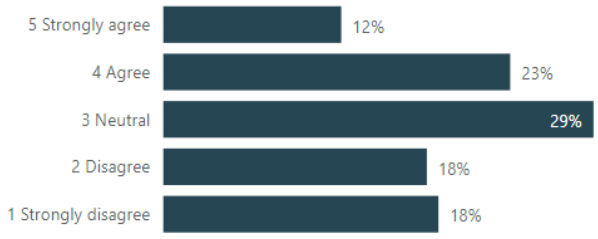
Institutions and rule of law has a strong influence on the degree to which enterprises perceive a level playing field significantly affecting competition and cooperation dynamics. Informality, inadequate dispute resolution mechanisms, perceived monopolistic tendencies within sectors, and in-group biases create barriers for enterprises to compete effectively and erodes trust between enterprises, which results in less meaningful collaboration to add value between businesses. The median enterprise in Honduras reported that they did not collaborate with similar enterprises at all in the past year. The competition and collaboration dynamic, while highly dependent on other structural factors, has a significant influence behaviorally at the enterprise-level in terms of levels of innovation and entrepreneurship. These factors reduce market and pricing power with nearly half of enterprises reporting they are stuck in a commodity-market in which they cannot raise raises at all without losing a disproportionate number of the customers or clients.

#13 FAIR COMPETITION

Ranking #4 Influence ● Dependence ○ Centrality ○ Change Not available

- Fair competition considers whether enterprises operate on a level playing field and have equal opportunities to grow. A level playing field allows enterprise to compete based on price, quality, and differentiation as opposed to predatory practices or monopolistic power to defeat competitors.
- 35% of enterprises agreed competition in their sector is fair, while 36% of enterprises considered competition in their sector unfair. Overall, enterprises are neutral with regards to whether they consider that competition in their sector is fair and that enterprises have the same opportunities to grow.[119]

FIGURE 45. PERCENTAGE OF ENTERPRISES THAT AGREE THAT COMPETITION IN THEIR SECTOR IS FAIR AND THAT ENTERPRISES HAVE THE SAME OPPORTUNITIES TO GROW.



36% of enterprises disagreed that competition in their sector is fair and that enterprises have the same opportunities to grow.

- The degree of fair competition in the sector[119] is dependent on informal sector competition[169] and the quality of public services and infrastructure.[243] These factors reveal the influence of the dynamic on institutions and rule of law on competition dynamics in Honduras. EXPERT

FIGURE 46. FACTORS FAIR COMPETITION IN SECTOR IS DEPENDENT ON

▼Informal sector competition[169]

▲ Public services and infrastructure[243]

➡

▲ Fair competition in sector[119]

- Fair competition and a level playing field tends to reduce discrimination,[114] increase pricing power of enterprises,[117] and promote higher levels of entrepreneurship.[312] This finding illustrates the need for more effective competition dynamics to improve competitiveness and inclusion in the market system. EXPERT

FIGURE 47. FACTORS INFLUENCED BY FAIR COMPETITION IN SECTOR

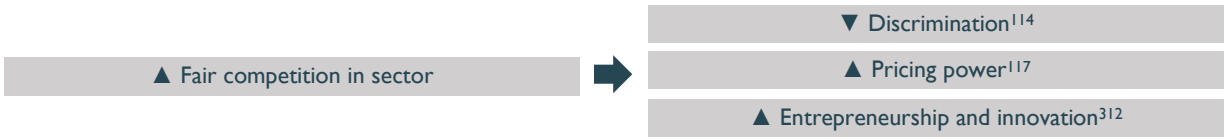


FIGURE 48. CHANGE IN FAIR COMPETITION BETWEEN 2018 AND 2020

Not available

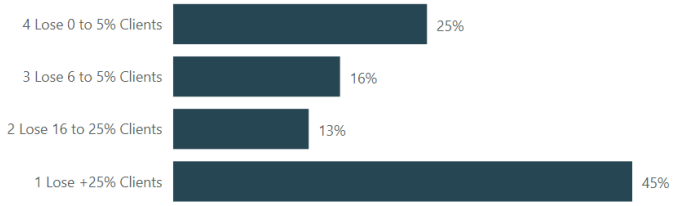
The variable fair competition was added to the Diagnostic this year. For this reason, a comparison between 2018 and 2020 cannot be made.

#14 PRICING POWER

Ranking #26 Influence Dependence Centrality Change

- Pricing power is a heuristic used to test whether an enterprise can raise prices without losing too many customers to a competitor. Pricing power signals the extent to which an enterprise has captured its market share or has created value through quality and differentiation ensuring loyalty of its customers.
- The theory is that if an enterprise loses more than 25% of customers after raising prices by 10% then the enterprise is in a commodity market. On the other hand, if the enterprise does not lose a significant number of customers, then the enterprise has differentiated its services based on some quality attribute or has acquired some form of market power that prevents it from losing its customers.

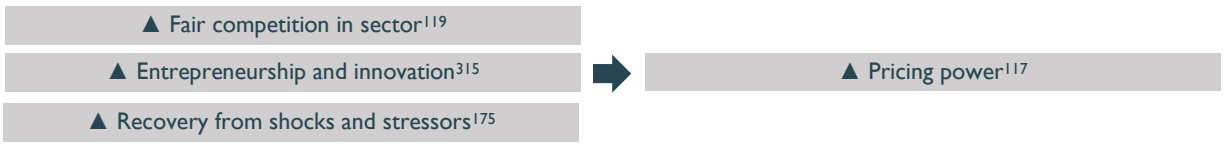
FIGURE 49. PERCENTAGE OF ENTERPRISES THAT INDICATE THEY RAISE PRICES BY 10% WITHOUT LOSING A CERTAIN PERCENTAGE OF THE CUSTOMERS OR CLIENTS.



More than half of Honduran enterprises express some level of pricing power or differentiation in quality of products and services.

- When competition in the market is fair,[119] enterprises compete in terms of delivering quality and differentiated value to customers. This form of competition increases enterprise pricing power.[117]
- The more enterprises innovated products and services,[315] the more enterprises were able to deliver value to customers and better they could retain customers while charging higher prices.[117]

FIGURE 50. FACTORS MARKET AND PRICING POWER IS DEPENDENT ON



- Enterprises reported that Honduras is a small market which in which a few, large companies have large market share and that creates barriers to entry for smaller enterprises to compete. WORKSHOPS
- In some cases, too much market and pricing power signals the concentration of power among few enterprises which provides advantages with respect to other enterprises in the system. This makes competition dynamics less fair and creates barriers for other enterprises in the system. WORKSHOPS

The big problem Honduras has is that all its markets are closed by the large businesses. If I wanted to dream, I would say free these markets and let small companies compete under the same conditions as any large business.
– Tourism business owner, San Pedro Sula

FIGURE 51. CHANGE IN PRICING POWER BETWEEN 2018 AND 2020

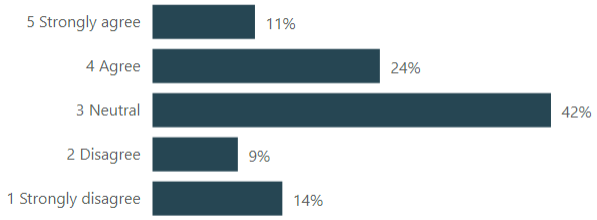
The 2018 Diagnostic collected evidence on pricing power for agroindustry, distributors, hotels, and tourism services. In 2018 and 2020, 44% of agroindustry and 45% of distributors were able to raise prices without losing 25% of customers. For hotels and tourism services, there was a difference with 47% of hotels able to raise prices in 2018 and 44% in 2020; while 49% of tourism services could raise prices in 2018 while 46% in 2020. Based on these measures, the evidence is mixed, and we do not interpret a significant change between 2018 and 2020 in the variable of pricing power.

#15 DISPUTE RESOLUTION

Ranking #9 Influence Dependence Centrality Change Not available

- Dispute resolution refers to processes used to resolve a conflict, dispute, or claim. Dispute resolution mechanisms may be formal, such as courts, mediation, or arbitrage, or may be informal.
- Overall enterprises are neutral in their agreement on when disputes emerge with other enterprises whether they were able to resolve those disputes in a just manner.[122]

FIGURE 52. PERCENTAGE OF ENTERPRISES THAT AGREE THAT WHEN DISPUTES EMERGE WITH OTHER ENTERPRISES, THEY ARE ABLE TO RESOLVE THOSE DISPUTES IN A JUST MANNER.



23% of enterprises disagree that disputes are resolved in a just manner when they emerge.

- The single predictor for agreement on dispute resolution is the level of confidence in government institutions and the rule of law in Honduras.[137] To note, dispute resolution may include judicial or court decisions or may include alternative resolution processes outside of courts.[122]

FIGURE 53. FACTORS DISPUTE RESOLUTION IS DEPENDENT ON

▲ Rule of law [137] → ▲ Dispute resolution [122]

- Dispute resolution mechanisms[122] reduce the need for corruption,[237] increase fairness of competition.[119] and improve business resilience capacities.[191] Increased business resilience capacities is likely due to conflicts that arise following a shock and there is a need to renegotiate contracts. EXPERT

- Effective dispute resolution[122] also increases confidence in other enterprises in the market system, which is an important determinant for collaboration and alliances (see collaboration below).[138 123]

FIGURE 54. FACTORS THAT DISPUTE RESOLUTION INFLUENCES

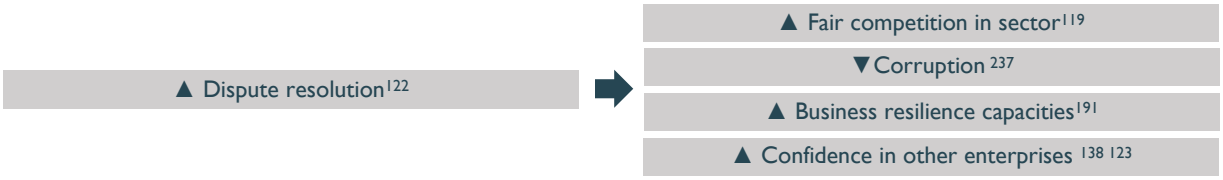


FIGURE 55. CHANGE IN DISPUTE RESOLUTION BETWEEN 2018 AND 2020

Not available

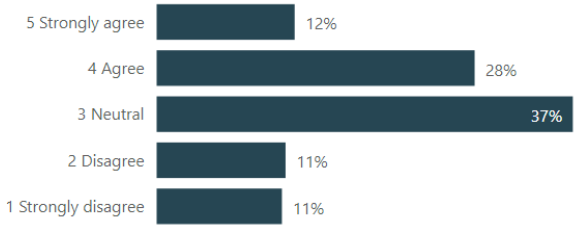
The variable dispute resolution was added to the Diagnostic this year. For this reason, a comparison between 2018 and 2020 cannot be made.

#16 CONFIDENCE IN OTHER ENTERPRISES

Ranking #24 Influence Dependence Centrality Change Not available

- Trust in markets means that enterprises can trust that others will refrain from taking exploitative actions against them, whether being defrauded or cheated in a business relationship. Trust is foundational for the effective operation of markets as trust facilitates the free and open exchange of good and services. [REF22]
- 40% of enterprises agree that they can trust other enterprises while 22% disagree. Overall, however, enterprises are neutral in their agreement on whether they can trust other enterprises.[122]

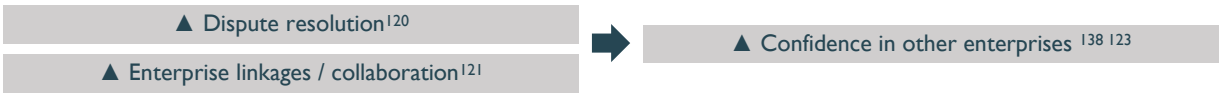
FIGURE 56. PERCENTAGE OF ENTERPRISES THAT AGREE THAT THEY CAN TRUST IN OTHER ENTERPRISES.



Enterprises are more positive on their level of trust in other enterprises in the market system.

- Confidence and trust in other enterprises[138 123] are dependent on levels of dispute resolution[120] and the strength of enterprise linkages and collaboration that exists between enterprises.[121] It is understood that trust is developed through collaboration and relationships between enterprises while mechanisms for accountability are required to ensure adherence to principles of moral behavior.

FIGURE 57. FACTORS CONFIDENCE IN OTHER ENTERPRISES IS DEPENDENT ON



- Greater confidence in other enterprises[123] influences the degree of enterprise linkages and collaboration between enterprises.[121 131] There is a direct feedback whereby the more enterprises collaborate the more they trust each other and the more willing they are to increase collaboration.

[22] C. Rose, David (2014). The Moral Foundation of Economic Behavior. Oxford University Press USA.

FIGURE 58. FACTORS INFLUENCED BY CONFIDENCE IN OTHER ENTERPRISES

▲ Confidence in other enterprises[123] → ▲ Enterprise linkages / collaboration[121] [131]

FIGURE 59. CHANGE IN CONFIDENCE IN OTHER ENTERPRISES BETWEEN 2018 AND 2020

Not available

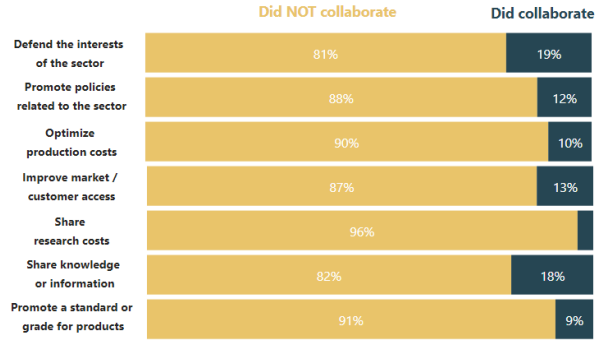
The variable confidence in other enterprises was added to the Diagnostic this year. For this reason, a comparison between 2018 and 2020 cannot be made.

#17 ENTERPRISE LINKAGES / COLLABORATION

Ranking #15 Influence Dependence Centrality Change

- Honduran enterprises tended not collaborate with other enterprises in the past year, whether to share information, access markets, optimize production, participate in the policy process, or other collective actions.[131] Those more common forms of collaboration for those enterprises that did collaborate were to coordinate to defend and promote sectoral interests, and share knowledge and information. [131]

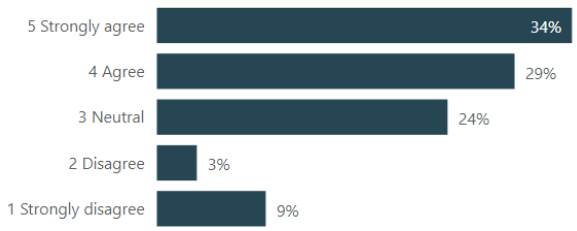
FIGURE 60. PERCENTAGE OF ENTERPRISES THAT COLLABORATED WITH OTHER ENTERPRISES IN THE PAST YEAR.



Enterprises in Honduras tend not to collaborate with other enterprises.

- Despite the low levels of collaboration between Honduran enterprises, nearly two-thirds (63%) of enterprises tended to agree that their business relationships endured for the long-term. [121]
- This suggests that enterprises have relatively stable business relationships but are not actively coordinating with those enterprises to take some collective action which would have mutual benefit. EXPERT

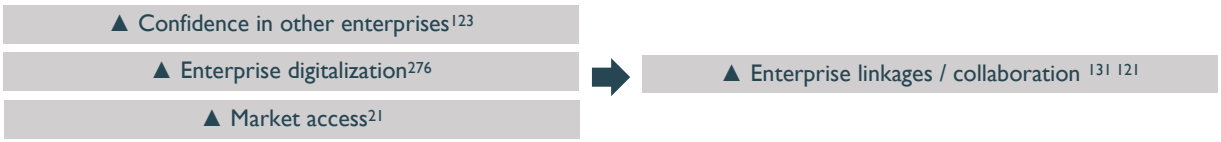
FIGURE 61. PERCENTAGE OF ENTERPRISES THAT AGREE THEIR BUSINESS RELATIONSHIPS ARE LONG-TERM.



Enterprise linkages tend to be stable and endure for a long-term.

- Enterprise linkages and collaboration is dependent on whether enterprises trust in other enterprises,[123] the degree to which enterprises are digitalized,[276] and whether enterprises have access to markets – specifically access to export markets.[21] Given relative agreement on confidence in other enterprises and increased digitalization this past year, market access may be interpretated as more limiting factor. EXPERT

FIGURE 62. FACTORS ENTERPRISE LINKAGES AND COLLABORATION IS DEPENDENT ON



- There is a reinforcing loop whereby increased enterprise linkages and collaboration reinforces confidence in other enterprises,[138 123] enterprise digitalization, [276] and market access.[21] At the same time, enterprise linkages and collaboration influences business resilience capacities[191] improving recovery from shocks.

FIGURE 63. FACTORS INFLUENCED BY ENTERPRISE LINKAGES AND COLLABORATION

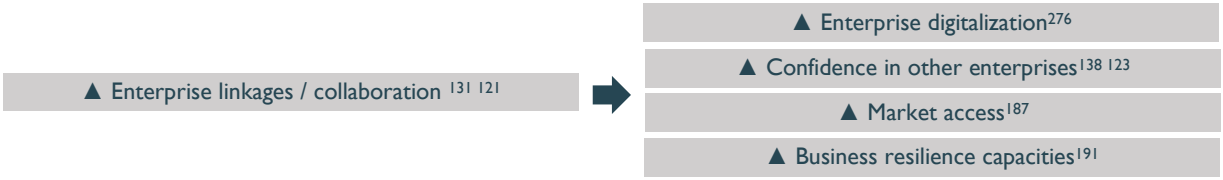


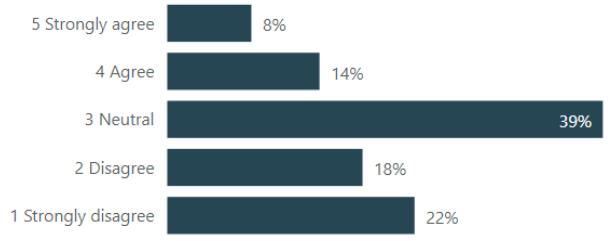
FIGURE 64. CHANGE IN ENTERPRISE LINKAGES / COLLABORATION BETWEEN 2018 AND 2020

The 2018 Diagnostic collected evidence on collaboration for agroindustry, distributors, hotels, and tourism services which can be compared to similar profile enterprises for 2020. In 2018, the average enterprise engaged in 0.70 types of collaboration whereas compared to 2020 the average enterprise of similar profile engaged in 0.86 types of collaboration. These differences are statistically significant within the p .10 range though meaningfully the median enterprise still did not collaborate. For this reason, based on this measure, we do not assess a change between 2018 and 2020.

IN-GROUP BIAS

- Enterprises that reported most of their business relationships were with companies owned by family and friends were more likely to have longer-term relationships[121] but also were less likely to collaborate.[131]
- This finding suggests that there is a sub-dynamic related to in-group bias that favors collaboration with individuals from the same personal and business networks. This in-group bias where it exists may influence the likelihood that individuals collaborate with others outside of their in-group. EXPERTS

FIGURE 65. PERCENTAGE OF ENTERPRISES THAT AGREE THAT MOST OF THEIR BUSINESS RELATIONSHIPS (E.G., SUPPLIERS, PARTNERSHIPS) ARE WITH COMPANIES OWNED BY FAMILY AND FRIENDS.



22% of enterprises agreed their business relationships were with family and friends while 40% of enterprises disagreed.

IV. CONNECTIVITY TO MARKETS

KEY FINDINGS

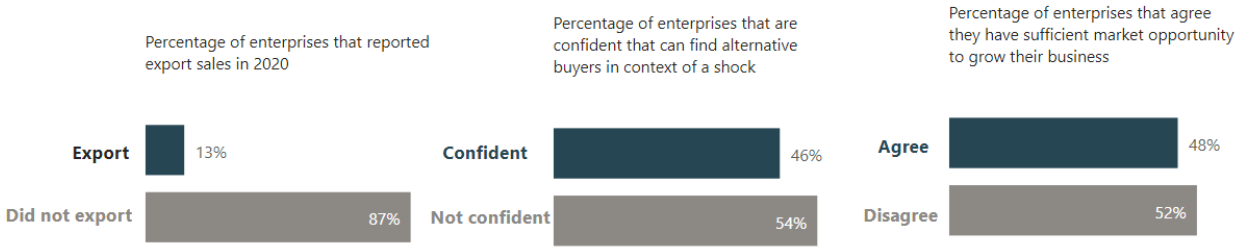
More than half of Honduran enterprises indicate they do not have sufficient access to markets to grow their business and lack access to alternative buyers or clients in the case of a market disruption. While the typical Honduran enterprise reports having access to finance and support services, these services are characterized as having little contribution to their business. There is evidence of deeper, structural issues in supporting markets which limits inclusive and quality access to financial and support services, particularly for non-traditional sectors, smaller enterprises, start-ups, and entrepreneurs. On the demand-side, enterprises are generally not primed to grow, lacking important entrepreneurial and innovative capacities at the enterprise-level (see dynamic below) as well as relationships and connections at a sectoral or industry-level.

#18 MARKET ACCESS

Ranking #12 Influence ● Dependence ● Centrality ● Change =

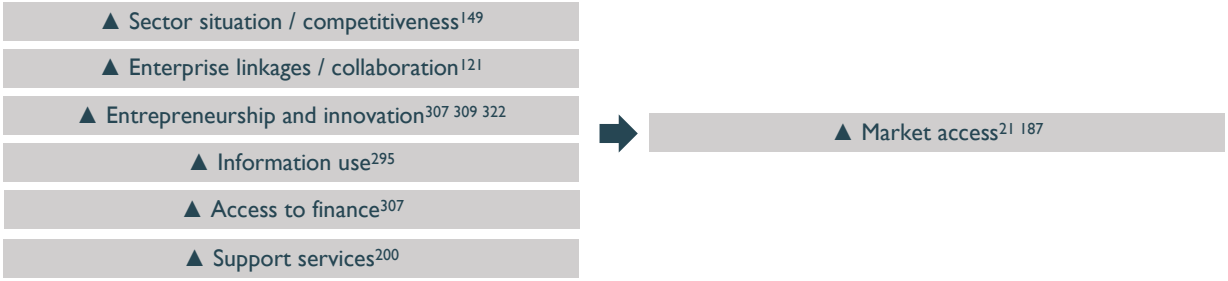
- Market access refers to the ability of enterprises to sell their goods and services both domestically and internationally; the degree to which there is sufficient demand for increased production; and the ability of enterprises to have alternatives (or choices) in the context of a market-based shock and disruption.
- 13% of enterprises reported export sales in 2020. [21] 48% of enterprises agreed that there was sufficient market demand or opportunity to grow their business. [308] Less than half or 46% of enterprises were confident in their ability to find alternative buyers in the context of a shock or stressor.[187]

FIGURE 66. PERCENTAGE OF ENTERPRISES REPORTING SUFFICIENT ACCESS TO MARKETS



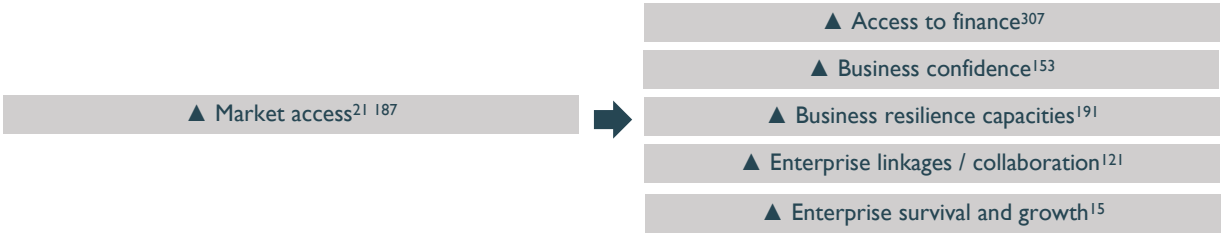
- Enterprises identified barriers to access to markets related to obtaining required permits and licenses from government institutions with prohibitive requirements, procedures and discretionality. WORKSHOPS
- Stakeholders also noted a lack of coherence in export and sectoral promotion actions to promote Honduras as a destination for investment and its products and services to export markets. WORKSHOPS
- It is considered that in many cases Honduran sectors have access to markets, but those sectors do not respond proactively to market opportunities suggesting supply-side constraints. EXPERTS
- Market access for enterprises is dependent on the overall sector situation and competitiveness,[149] strength of enterprise linkages and collaboration,[121] levels of innovation and entrepreneurship,[307 309 322] use of information by enterprises, [295] access to finance[307] and support services[200] by enterprises.

FIGURE 67. FACTORS MARKET ACCESS IS DEPENDENT ON



- Market access influences the enterprise's ability to access finance,[307] business confidence in future growth,[153] capacities to mitigate and adapt to disruptions,[191] the strength of their linkages with other enterprises and degree of collaboration,[121] and enterprise survival and growth.[15]

FIGURE 68. FACTORS INFLUENCED BY MARKET ACCESS



- Diversification was identified by experts as a critical requirement for increased market access. Honduras is reportedly overly dependent on few competitive products – coffee and textiles, among others – and without significant market diversification within these products which reduces market access. WORKSHOPS
- Honduras Economic Complexity Index (ECI) score was -0.67 in 2018 ranking 98 of 133 economies – the fifth lowest in Latin America ahead of Nicaragua, Ecuador, Bolivia, and Venezuela. Honduras's ECI score dropped from -0.36 in 2014 to -0.67 in 2018 and ranking decreased from 76th in 2014 to 98th in 2018. The ECI score is a measure of diversification and complexity of country's export basket. REF23

FIGURE 69. CHANGE IN MARKET ACCESS BETWEEN 2018 AND 2020

The 2018 Diagnostic collected evidence on whether enterprises were confident in their ability to find alternative buyers in the context of a shock or stressor for agroindustry, distributors, hotels, and tourism services which can be compared to similar profile enterprises for 2020. 51.0% of enterprises were confident in their ability to find alternative buyers or suppliers in 2018 compared to 44.7% for similar profile enterprises in 2020. These differences were not statistically significant. For this reason, based on this measure, we do not assess a change between 2018 and 2020.

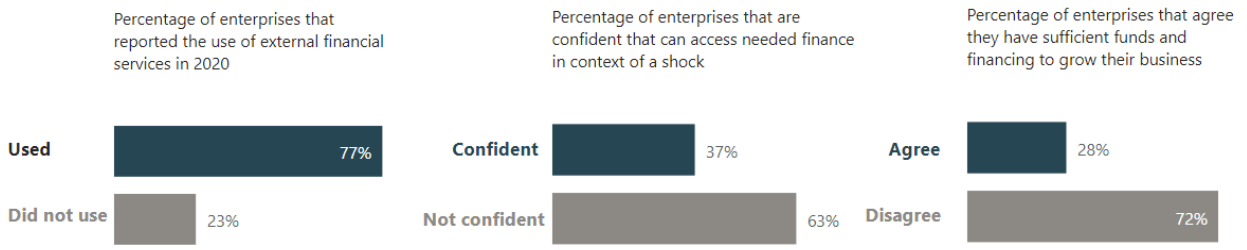
#19 ACCESS TO FINANCE

Ranking #27 Influence ● Dependence ● Centrality ● Change ▼

- Access to finance considers not only the use of external financing by enterprises, but also the quality of that financing, measured by whether it is accessible in the context of a disruption or shock and whether it is sufficiently flexible in repayment terms and related requirements to support the enterprise to grow.
- While 77% of enterprises used external financial services,[192] only 37% were confident they could access needed financing in the context of a shock[188] and only 27% were agreed they currently had sufficient funds and financing needed to grow their business.[307] These findings suggest there exists barriers to access to the types of financing needed for enterprises to grow their business and to recover from shocks. EXPERT

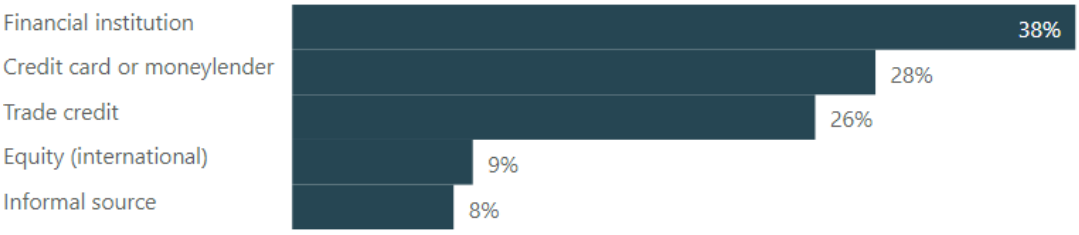
[23] The Growth Lab at Harvard University. (2020) The Atlas of Economic Complexity. Retrieved from: https://atlas.cid.harvard.edu/

FIGURE 70. PERCENTAGE OF ENTERPRISES REPORTING ACCESS TO FINANCE



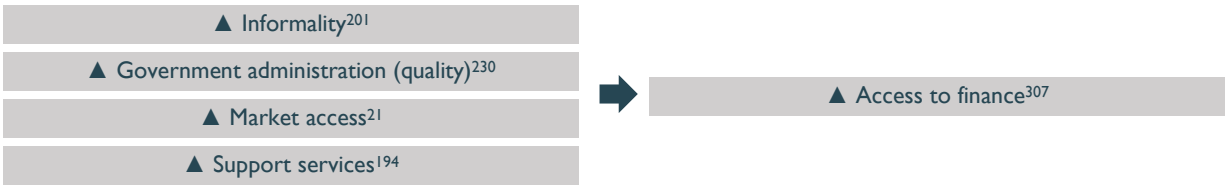
- The most frequently used sources of financing reported by enterprises were loans from financial institutions,[263] credit cards and money-lenders[264] and trade credit.[262]

FIGURE 71. PERCENTAGE OF ENTERPRISES REPORTING USE OF SOURCE OF FINANCE BY TYPE



- Access to finance is dependent on whether the enterprise is formal,[201] whether it has secured the necessary registrations, permits and licenses,[230] whether it has access to export markets,[21] and the quality of the support services received.[194]

FIGURE 72. FACTORS ACCESS TO FINANCE IS DEPENDENT ON



We do not have financial institutions that support the microentrepreneurs to have easy access to credit. The procedures to access financing are too cumbersome. – Woman business owner, La Ceiba

- Further, increased access to finance[307] enables enterprises to be able to access markets.[21]

FIGURE 73. FACTORS INFLUENCED BY ACCESS TO FINANCE

- As identified the support services section below, enterprises that accessed financial services reported it as having the least contribution to the enterprise compared to other forms of support services accessed.[192]
- Experts interpret this finding that existing financial services are not developed to MSME client needs but are designed to fit risk management and compliance requirements of banks. The need for greater diversity of financial products focused on the needs of MSMEs is critical to improve quality of services. EXPERT

- Smaller enterprises are less likely to report access to loans from financial institutions,[263] are less confident in their capacity to secure financing in the context of a shock,[188] and are less likely to agree they have the funds and financing needed to be able to grow their business.[307]

FIGURE 74. DIVING DEEPER INTO FINANCIAL SYSTEMS

The topic of financial systems generated substantial dialogue and expert opinions that went deeper than what is explored and directly measured in the Diagnostic. Stakeholder perspectives on these factors are shared below:

Non-bank financial sector

- There is a reported difficulty of the formal banking sector in reaching down to microenterprise which emphasizes the importance of the non-banking financial system (microfinance and cooperatives) at this level. WORKSHOPS

Financial products

- Stakeholders identified a lack of diversified financial instruments such as micro-leasing, seed capital, factoring, educational savings accounts, and other non-traditional products that limits access to finance. WORKSHOPS

Financial education / investment readiness

- Experts noted the lack of investment readiness on the part of smaller enterprises, specifically having prepared financial statements or business model-related issues that do not qualify them for credit. WORKSHOPS
- Similarly, experts identified an absence of financial education that leads to being overindebted and reduces effective savings and planning for unforeseen events or managing cash flow for significant investments. WORKSHOPS

Over-indebtedness

- Stakeholders identified being overindebted as a frequent issue, particularly among enterprises that finance their business with credit cards and moneylenders. WORKSHOPS According to Diagnostic data, 19.5% of enterprises reported being overindebted to cope with shocks from the past year, notably COVID-19.[182] Enterprises that reported using credit cards and financing from moneylenders[264] were significantly more likely to report being overindebted.[182]

Equity and long-term capital

- Experts identified a lack of longer-term investment capital as a limitation. The absence of a securities market, venture capital, business angels and other providers of long-term capital in Honduras is one of the hypothesized reasons mentioned by stakeholders for why levels of innovation and entrepreneurship is low. WORKSHOPS
- At the same time, the development of equity and long-term capital markets requires changes in laws and regulations, and it is anticipated the development of these markets would take some time to achieve. WORKSHOPS

Guarantees

- Experts identified that guarantee funds have enabled access to finance for small enterprises but are insufficiently funded to cover the financial demands of microenterprises. WORKSHOPS

FIGURE 75. CHANGE IN ACCESS TO FINANCE BETWEEN 2018 AND 2020

The 2018 Diagnostic collected evidence on the sources of finance used by agroindustry, distributors, hotels, and tourism services which can be compared to similar profile enterprises for 2020. In 2018 27.6% of enterprises reported access to trade credit while only 21.1% of enterprises reported access in 2020. This difference is statistically significant. 40.1% of enterprises reported access to bank loans in 2018 compared to 36.3% in 2020. This difference was not statistically significant. 13.8% of enterprises reported financing their business with credit cards or loans from moneylenders in 2018 compared to 24.7% of enterprises in 2020. This difference was statistically significant. Based on these measures, we interpret access to finance had decreased in 2020 compared to 2018.

#20 SUPPORT SERVICES

Ranking #16 Influence ● Dependence ● Centrality ● Change =

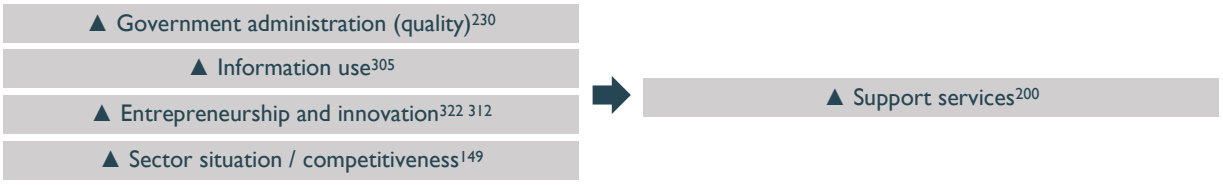
- Support services include training, mentoring, and technical services to enterprise to increase productivity. Support services supplement in-house skills and knowledge in key areas that enterprises may lack, thereby enabling enterprises to increase their overall potential to grow.
- The median enterprise reported accessing each of the identified support services in the past year. [199] This high percentage is attributed to the COVID-19 crisis and the increased offer of services made available to enterprises to adapt to the crisis. EXPERT However, the median enterprise only reported accessing one support services that had a large or significant contribution to their business in the past year.[200]
- A Net Promoter Score is calculated by the percentage of support services that reportedly had a large contribution minus the percentage of support services that had no contribution to the business. The overall Net Promoter Score of Honduran support services is -13% (on scale of -100% to +100%).

FIGURE 76. PERCENTAGE OF ENTERPRISES THAT REPORTED SUPPORT SERVICES RECEIVED HAD NO, SOME OR A LARGE CONTRIBUTION TO THEIR BUSINESS. RANKING IS BASED ON NET PROMOTER SCORE (NPS) CALCULATION.

Support Service Accessed by Enterprise	% Enterprises	% No Contribution	% Some Contribution	% Large Contribution	NPS Score	NPS Rank
Staff and workforce training	86%	24%	37%	39%	16%	1
Sales and advertising	83%	33%	33%	34%	2%	2
Business support services	80%	40%	33%	27%	-14%	3
Market research	77%	43%	35%	22%	-21%	4
Legal and administrative services	77%	41%	40%	19%	-23%	5
Certifications and audits	72%	49%	27%	24%	-26%	6
Financial services	77%	49%	31%	20%	-30%	7

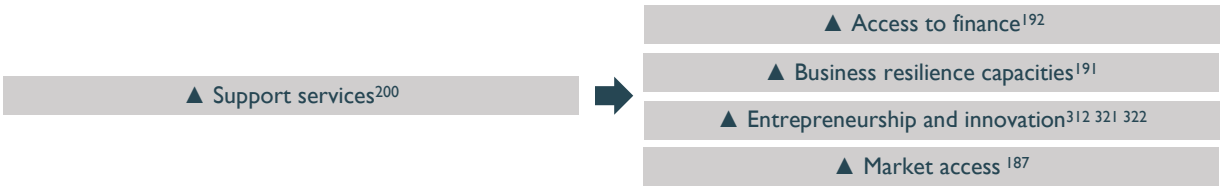
- Enterprise access to support services [300] depends on the quality of government administration,[230] use of information,[305] how entrepreneurial and innovative the enterprise is,[322 312] and sector competitiveness.[149]

FIGURE 77. FACTORS THE QUALITY OF SUPPORT SERVICES IS DEPENDENT ON



- Enterprise that access quality support services [300] are better able to access finance,[192] have improved business resilience capacities to mitigate and adapt to shocks and stressors,[191] are more entrepreneurial and innovative,[312 321 322] and are better able to access markets.[187]

FIGURE 78. FACTORS INFLUENCED BY THE QUALITY OF SUPPORT SERVICES



- Enterprises noted that there is a tendency to view paying for support services as a cost and not an investment which limits their willingness to pay for these services. WORKSHOPS
- Stakeholders identified the need for significant accompaniment using proven methodologies and tools for enterprises to make the transition to formality and change their business models. WORKSHOPS

Marketing is always seen as a cost, not as an investment. If there is no marketing and advertising investment, we cannot achieve that connection with the client. – Agribusiness owner, Tegucigalpa

FIGURE 79. CHANGE IN SUPPORT SERVICES BETWEEN 2018 AND 2020

The 2018 Diagnostic collected evidence on the number of support services accessed by agroindustry, distributors, hotels, and tourism services that had a significant contribution to their business which can be compared to similar profile enterprises for 2020. In 2018, the average enterprise accessed 1.2 types of support services that had a significant contribution to their business. In 2020, the average enterprise accessed 1.38 types of support services that had a significant contribution to their business. Though difference in means is statistically significant at p .10, however, the difference in medians is still only one support services that had a significant contribution. Based on this measure, we interpret access to support services has not changed meaningfully 2018 to 2020.

V. BUSINESS STRATEGIES

KEY FINDINGS

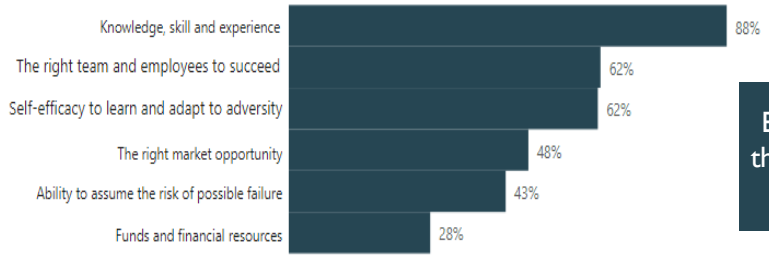
Enterprises tend to lack specific entrepreneurial and innovation capacities needed to realize market opportunities. There is a high reported frequency of subsistence or necessity-based entrepreneurs who are reportedly self-employed due to the lack of paid jobs in the economy. Disruptive innovation, defined as an innovation which is new to the market, is uncommon. Entrepreneurship and innovation are dependent on multiple factors that seem to be lacking - from a qualified workforce, quality support services, effective government administration, etc. Creating the enabling conditions for higher levels of entrepreneurship and innovation is considered a complex task, requiring significant levels of coordination and cooperation between public and private entities to build strong entrepreneurial and innovation systems.

#21 ENTREPRENEURSHIP AND INNOVATION

Ranking #10 Influence ● Dependence ● Centrality ● Change Not available

- A set of capacities are hypothesized which are considered important for enterprises to identify and allocate resources to realize market opportunities, create and capture economic value.
- The median enterprise responded that they were confident in 3 of 6 of these capacities. In other words, the median enterprises lacked half of the capacities needed to realize market opportunities.[312]
- The less frequent capacities that enterprises reported having included the right market opportunity; the ability to assume the risk of possible failure; and funds and financial resources.[312]

FIGURE 80. PERCENTAGE OF ENTERPRISES THAT HAVE THE CAPACITIES TO REALIZE MARKET OPPORTUNITIES.

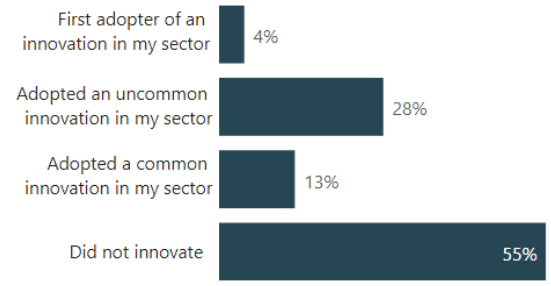


Enterprises tended to report lacking three of the six capacities identified to realize a market opportunity.

- The factors which influence and are dependent on entrepreneurship are the same as for innovation. For this reason, the two factors are evaluated together as entrepreneurship and innovation. EXPERT
- Innovations are new or significantly improved products, process or services adopted by enterprises. While to be considered innovations (new or improved), these must be new to the company, they do not necessarily have to be new to the market. Innovations create new value for the enterprise.
- 45% of enterprises reported innovating in the past year. Enterprises that innovated tended to report the innovation already existed in their sector but was relatively uncommon or atypical. Only 4% of enterprises reported that they were the first adopters of an innovation in their sector the past year.[322]

Entrepreneurs know they must take risks and that they must persevere to overcome these risks.
– Woman enterprise owner, Santa Rosa de Copan

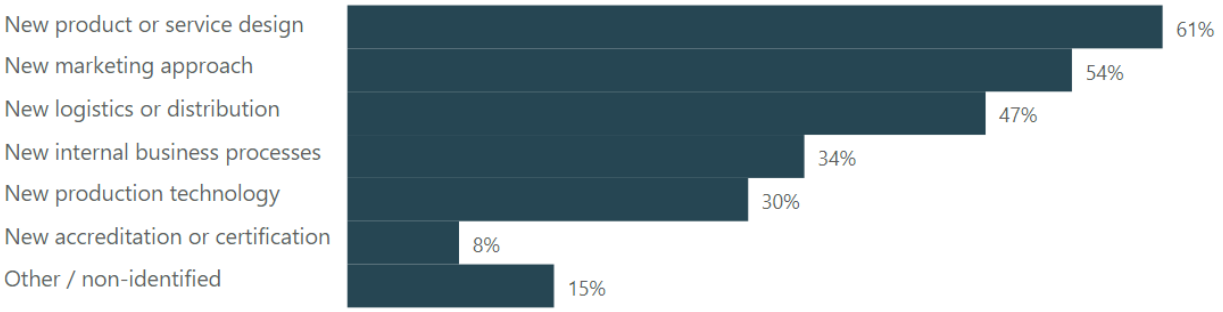
FIGURE 81. PERCENTAGE OF ENTERPRISES THAT INNOVATED BY COMMONNESS OF INNOVATION.



45% of enterprises adopted an innovation in the past year.

- The most frequent innovations adopted by enterprises in the past year related to new product and services, marketing and new logistics and distribution (which includes on-line delivery).[314 to 320]

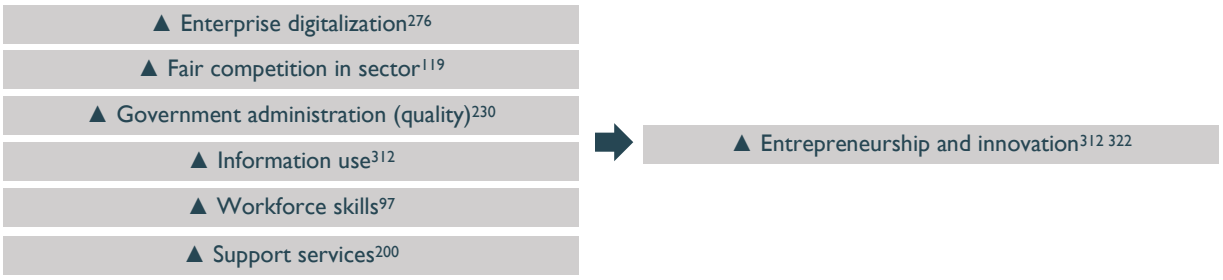
FIGURE 82. PERCENTAGE OF ENTERPRISES THAT INNOVATED BY THE TYPE OF INNOVATION ADOPTED.



We provide a better service to attract customers, because, to generate profits this is very important, the customer must be treated as family, as a friend and not just see it as a business. – Tourism enterprise owner, La Ceiba

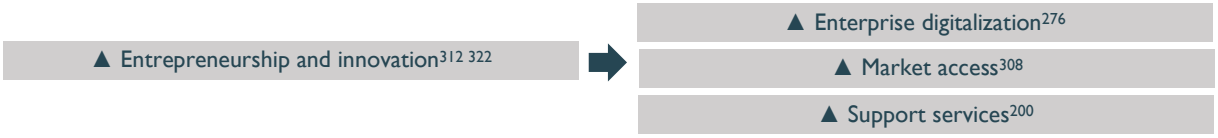
- Entrepreneurship and innovation[312] [322] depends on enterprise digitalization,[276] fair competition in sector,[119] quality of government administration,[230] access to information[312] and support services.[200]

FIGURE 83. FACTORS ENTREPRENEURSHIP AND INNOVATION IS DEPENDENT ON



- Entrepreneurship and innovation[312] [322] influences enterprise digitalization[276] and access to markets.[308] Experts identified that entrepreneurship and innovation results in better services to customers based on what they want or need, while also opening-up new market segments and reducing operating costs. EXPERT Entrepreneurship and innovation[312] [322] also increases access to quality support services[200]. This occurs as entrepreneurs seek out relevant services needed to innovate and sell new products and services. EXPERT

FIGURE 84. FACTORS INFLUENCED BY ENTREPRENEURSHIP AND INNOVATION



- Experts identified that few resources are devoted to research and development, and business strategies tend to be aimed at strengthening current market position rather than seeking new opportunities. EXPERT
- In World Economic Forum's Global Competitiveness Index, Honduras scores lowest in the sub-domain of Research and Development (R&D), with a rank of 135 out of 140 countries globally. R&D is measured by number of scientific publications, patent applications (per million people), research and development expenditure as a component of GDP, and the prominence of research institutions. REF24
- Experts identified the absence of coordination between academia, private sector, and government to generate a shared vision and to collectively promote innovation in Honduras. Different models for innovation were discussed including university-based and chamber-based innovation hubs. WORKSHOPS
- Stakeholders identified the lack of entrepreneurial education in universities and secondary schools needed to develop entrepreneurial culture, attitude, and skills to become entrepreneurs. WORKSHOPS
- Entrepreneurship was characterized in Honduras as primarily subsistence or necessity-based ventures, with few more dynamic, opportunity-based ventures that were transformative. WORKSHOPS
- A possible distinction was hypothesized between levels of entrepreneurship between family-owned and non-family-owned enterprises. In the Diagnostic, 59% of enterprises identified as being family owned.[14] However there was no significant difference in levels of entrepreneurship between the two groups.

[24] Schwab, Klaus. The World Economic Forum. (2019). The Global Competitiveness Report 2019.

FIGURE 85. CHANGE IN INNOVATION AND ENTREPRENEURSHIP BETWEEN 2018 AND 2020

Not available

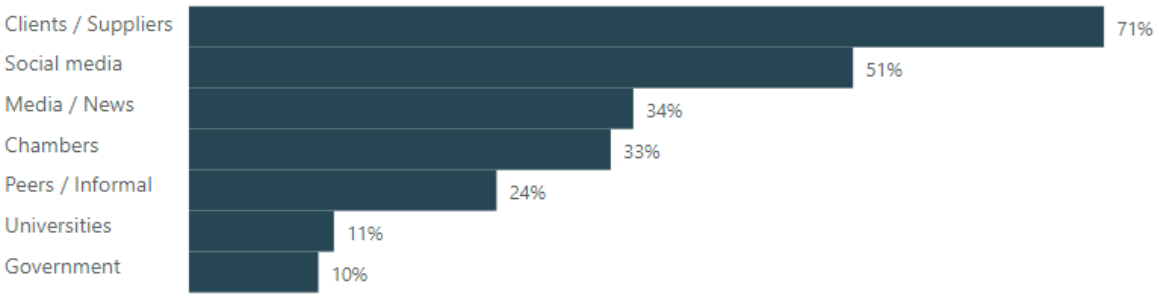
New measures for innovation and entrepreneurship were added in the Diagnostic this year. Secondary data on innovation is also not available for the year 2020 from the World Economic Forum's Innovation Index or other secondary sources. For this reason, a comparison between 2018 and 2020 cannot be made.

#22 INFORMATION USE

Ranking #8 Influence ● Dependence ● Centrality ● Change ▲

- Enterprises reported using two sources of information in the past year to make decisions.[294] The most frequent sources of information used are from clients and suppliers and from social media.

FIGURE 86. PERCENTAGE OF ENTERPRISES THAT REPORT THE PRINCIPAL SOURCE OF INFORMATION USED BY THEIR ENTERPRISE TO MAKE DECISIONS COMES FROM ONE OF THE FOLLOWING SOURCES



- A Net Promoter Score is calculated by the percentage of information sources that reportedly had a large contribution minus the percentage of information sources that had no contribution to the business. The overall Net Promoter Score of information sources is +61% (on scale of -100% to +100%).
- The most valuable information source accessed by enterprises was social media followed by information from clients and suppliers. The least accessed sources of information – government and universities – were also the sources qualified as having the least contribution to the enterprise.[305]

FIGURE 87. PERCENTAGE OF ENTERPRISES THAT REPORTED INFORMATION RECEIVED HAD NO, SOME OR A LARGE CONTRIBUTION TO THEIR BUSINESS. RANKING IS BASED ON NET PROMOTER SCORE (NPS) CALCULATION.

Information Accessed by Enterprise	% No Contribution	% Some Contribution	% Large Contribution	NPS Score	NPS Rank
Social media	2%	24%	74%	72%	1
Clients / Suppliers	4%	26%	70%	66%	2
Chambers	5%	30%	65%	60%	3
Media / News	4%	32%	63%	59%	4
Peers / Informal	5%	40%	55%	49%	5
Universities	9%	35%	56%	48%	6
Government	14%	51%	35%	21%	7

- Enterprise access to information[305] the past year depends on enterprise digitalization[276] and the degree of collaboration and linkages with other enterprises in the market system.[121]

FIGURE 88. FACTORS THE USE OF INFORMATION USE IS DEPENDENT ON

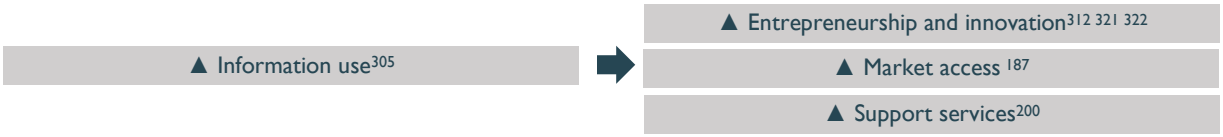
▲ Enterprise digitalization[276]

▲ Enterprise linkages / collaboration[121]

➡ ▲ Information use[305]

- Enterprise that access quality information [303] are more innovative and entrepreneurial,[312 321 322] have improved market access[187] and are able to access better quality support services.[200]

FIGURE 89. FACTORS INFLUENCED BY INFORMATION USE



There is a lack of information on the quality required by markets, and also in general, there is a lack of knowledge of the requirements needed to enter the markets. – Transport company owner, Tegucigalpa

FIGURE 90. CHANGE IN INFORMATION USE BETWEEN 2018 AND 2020

▲

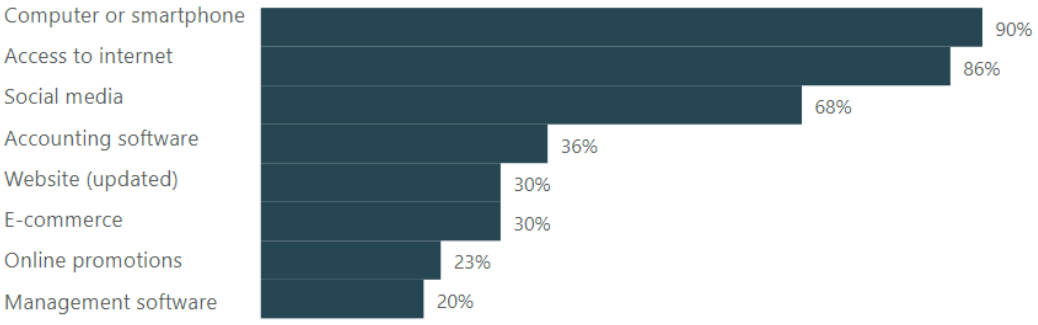
The 2018 Diagnostic collected evidence on the percentage of enterprises using information to make decisions by source for agroindustry, distributors, hotels, and tourism services which can be compared to similar profile enterprises for 2020. In 2018, 16.2% of enterprises reported using information from social media to make decisions whereas 48.3% of enterprises did in 2020. In 2018, 20.9% of enterprises used information from their chambers whereas 31.8% of enterprises did in 2020. In 2018, 44.5% of enterprises used information from their suppliers or clients whereas 65.7% of enterprises did in 2020. These differences are statistically significant. Based on this measure, we interpret information usage has improved meaningfully 2018 to 2020.

#23 ENTERPRISE DIGITALIZATION

Ranking #7 Influence ● Dependence ● Centrality ● Change =

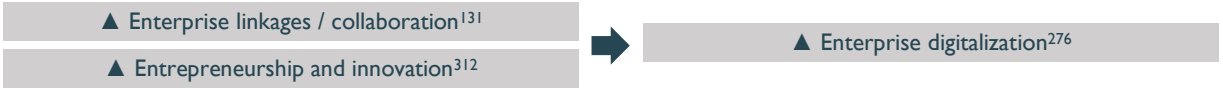
- The median enterprise has a computer or smartphone, access to the internet, and a social media account. Less than a third of enterprises however use accounting software, have a website, or use e-commerce.[276]

FIGURE 91. PERCENTAGE OF ENTERPRISES THAT USE INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)



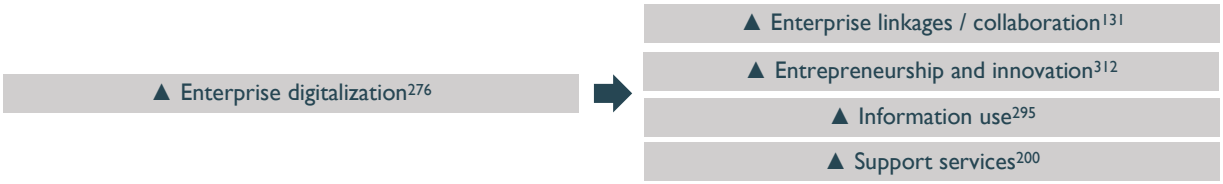
- Enterprise digitalization[276] depends on levels of entrepreneurship and innovation[312] and the degree of collaboration and linkages with other enterprises in the market system.[121]

FIGURE 92. FACTORS ENTERPRISE DIGITALIZATION IS DEPENDENT ON



- Enterprise digitalization.[276] also influences the levels of entrepreneurship and innovation[312] and the degree of collaboration and linkages with other enterprises in the market system.[121] Enterprise digitalization can help to facilitate a virtuous cycle of enterprise collaboration, innovation, and entrepreneurship. EXPERT
- Enterprise digitalization[276] further influences enterprise access to information[295] and support services.[200] Digitalization is understood as a tool to help connect enterprises to supporting markets. EXPERT

FIGURE 93. FACTORS INFLUENCED BY ENTERPRISE DIGITALIZATION



- Enterprises noted that social media allows enterprise to reach wider markets. Platforms such as Booking.com and TripAdvisor also help position enterprises in international markets. WORKSHOPS
- Enterprises identified the challenges around digitalization of their business, and the need to hire skilled employees to manage online marketing and social media function. WORKSHOPS
- Stakeholders identified the major shift in the past year as enterprises have moved to sell their products and services on-line through social media. However, most operate payment and delivery through WhatsApp and have not fully integrated into an e-commerce platform or website. WORKSHOPS
- Honduras ranks second lowest on ICT adoption in the World Economic Forum Global Competitiveness Report for 2019 ranking 124 out of 141 countries. Honduras ranks lowest within this pillar on mobile-cellular telephone and broadband subscriptions (32.1 out of 100 have mobile broadband). REF25

I think that if you are not up to date in technology, you are not doing anything. For a small company, you have to pay a designer, you have to pay a programmer, to be able to create something that I want to be seen. – Enterprise owner, Tegucigalpa

FIGURE 94. CHANGE IN ENTERPRISE DIGITALIZATION BETWEEN 2018 AND 2020

The 2018 Diagnostic collected evidence on the digitalization of agroindustry, distributors, hotels, and tourism services which can be compared to similar profile enterprises for 2020. In 2018, 54.4% of agroindustry, distributors, hotels, and tourism services had a social media account. In 2020, 63.0% of similar profile enterprises had a social media account. This difference was statistically different. However, there are no significant changes in e-commerce, update of websites, use of accounting software or other forms digitalization. The median ICT Index score further did not increase. Based on this measure, we do not consider that digitalization has improved meaningfully 2018 to 2020.

VI. RISK AND RESILIENCE

KEY FINDINGS

Honduran enterprises are extremely vulnerable to a diverse range of shocks and stressors from crime and extortion to extreme climate and weather events. These shocks and stressors constrain enterprise growth and investment with significant negative effects on job creation and maintenance. Honduran enterprises lack the resilience capacities to mitigate, adapt to and recover from such severe disruptions. The resulting negative coping behaviors adopted by enterprise create significant social harm with the most common coping behavior being to lay-off or suspend staff thereby shifting the risk and the negative effects of shocks and stressors from the enterprise-level and to individual and household-level.

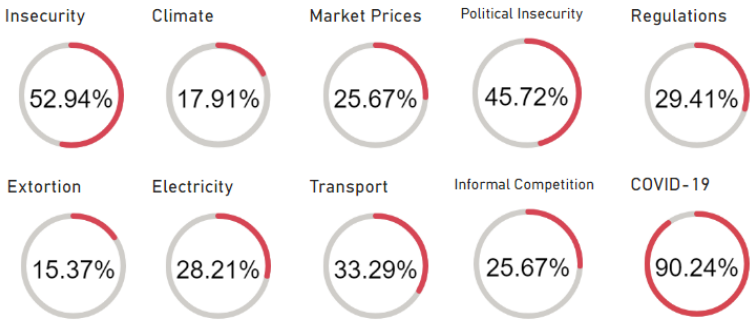
[25] Schwab, Klaus. The World Economic Forum. (2019). The Global Competitiveness Report 2019.

#24 SEVERITY OF SHOCKS AND STRESSORS

Ranking #30 Influence Dependence Centrality Change

- Shocks are sudden disturbances which have sudden negative impacts on the performance of the market system, whereas stressors are more recurrent events that threaten to disrupt performance. Both shocks and stressors negatively impact the ability of enterprises to grow, create and maintain jobs.
- The median enterprise was affected by three different types of shocks or stressors. Note this survey was completed before Hurricanes Eta and Iota, which would have made these four disturbances in total.[173]

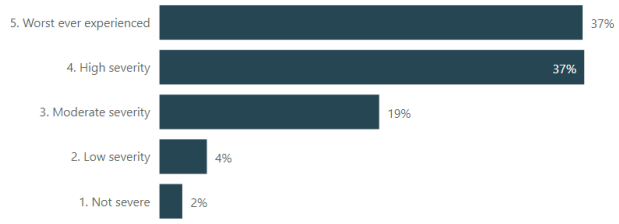
FIGURE 95. PERCENTAGE OF ENTERPRISES THAT WERE AFFECTED BY TYPE OF SHOCK OR STRESSOR.



The most frequent shocks and stressors experienced by enterprises were COVID-19 and crime and insecurity.

- In Honduras, agricultural enterprises are significantly more likely to be affected by climate change and market/price shocks than other enterprises. Different support service sectors – such as the financial sector – are significantly more likely to be affected by political shocks and risks. Food services and retail-level businesses are more likely to experience crime and extortion than other profile enterprises.[173]
- The more shocks and stressors experienced by enterprises and more severe those shocks and stressors, the less able enterprises are to cope with and recover from those shocks and stressors. Enterprises characterized the shocks and stressors experienced in 2020 as severe with 37% of enterprises identifying it was the worst they had ever experienced for shocks and stressors since beginning operations.[174]

FIGURE 96. PERCENTAGE OF ENTERPRISES THAT REPORT SHOCKS EXPERIENCED THIS YEAR AS SEVERE.



Most enterprises reported the shocks this year as severe and the worst ever experienced.

- The severity of shocks and stressors experienced by enterprises is dependent on levels of crime and theft[248], poor quality government administration,[231] informal sector competition,[256] low-quality public services and infrastructure,[239] climate change and weather volatility, [EXPERT] and market price volatility. [EXPERT]

FIGURE 97. FACTORS SEVERITY OF SHOCKS AND STRESSORS IS DEPENDENT ON

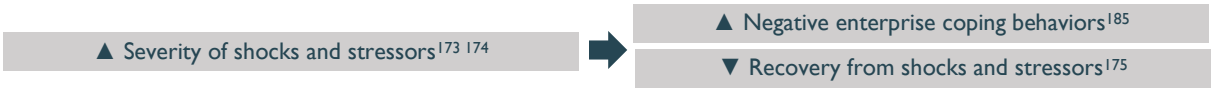
- ▲ Crime and theft[248]
- ▼ Government administration (quality)[231]
- ▲ Informal sector competition[256]
- ▼ Public services and infrastructure[239]
- ▲ Climate change and weather volatility [EXPERT]

→ ▲ Severity of shocks and stressors[173] [174]

▲ Market price volatility EXPERT

- The severity of the shock or stressor[173] [174] influences whether the enterprise will resort to negative coping behaviors (firing staff, etc.) [185] and the degree to which the enterprise is able to recover from the shock.[175]

FIGURE 98. FACTORS INFLUENCED BY SEVERITY OF SHOCKS AND STRESSORS



We really could have a national contest to see which, of all the shocks is worst, because there is insecurity, extortion, political issues, climate change, and rising energy costs. – Tourism enterprise owner, La Ceiba

FIGURE 99. CHANGE IN SEVERITY OF SHOCKS AND STRESSORS BETWEEN 2018 AND 2020

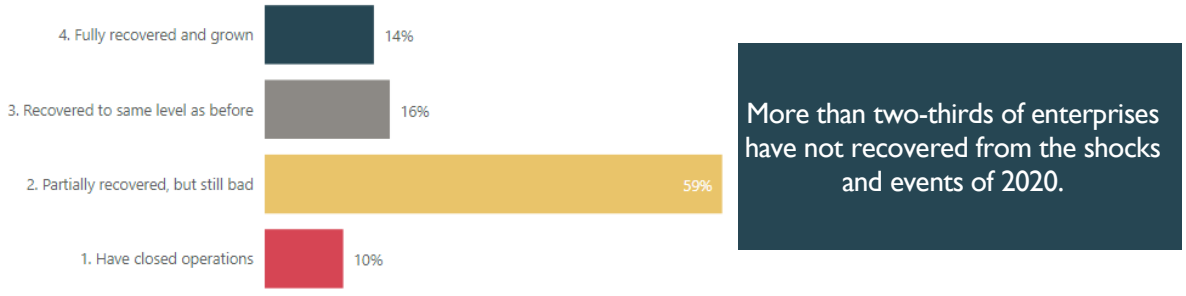
The 2018 Diagnostic collected evidence on the number of types of shocks and stressors experienced by agroindustry, distributors, hotels, and tourism services which can be compared to similar profile enterprises for 2020. Enterprises were significantly more likely to experience problems related to insecurity in 2020 but were less likely to experience disruptions from political issues. With the addition of COVID-19 and Hurricanes Eta and Iota, the typical enterprise experienced 4 different types of shocks in stressors in 2020 compared to 2 in 2018. Based on this measure, we interpret the severity of shocks and stressors worsened between 2018 to 2020.

#25 DEGREE OF RECOVERY

Ranking #22 Influence Dependence Centrality Change

- Resilience as an outcome is measured by the ability of enterprises to recover or "bounce back" from shocks and stressors. The full extent of recovery considers not only recovering to the level before the crisis, but the degree to which the enterprise is able to continue to grow and become better off.
- 30% of enterprises have recovered from shocks and stressors experienced in 2020. 10% of enterprises have closed operations entirely, while another 59% have recovered partially but are still in bad shape.[175]

FIGURE 100. PERCENTAGE OF ENTERPRISES THAT REPORTED RECOVERING FROM SHOCKS AND STRESSORS.



- The more severe the shock and stressor[174] the less likely the enterprise is to recover.[175] At the same time, enterprises have a set of resilience capacities to mitigate, adapt and recover from shocks and stressors. The higher the business resilience capacities[191] the greater the recovery from shocks and stressors.[175]

FIGURE 101. FACTORS RECOVERY FROM SHOCKS AND STRESSORS IS DEPENDENT ON

▲ Business resilience capacities[191]
▼ Severity of shocks and stressors[174]
→ ▲ Recovery from shocks and stressors[175]

- Recover from shocks and stressors[175] is a key determinant of enterprise survival and growth.[15] Enterprises cannot grow to generate jobs if they cannot recover from shocks and stressors that affect them. EXPERT
- The ability to recover from shocks and stressors[175] also influences pricing power.[117] In other words, enterprises are more likely to retain customers and improve quality if they are resilient. EXPERT
- Investment in production and growth[154] requires that enterprises be able to manage risks effectively and handle the shocks and stressors that affect them over time.[175]

FIGURE 102. FACTORS INFLUENCED BY RECOVERY FROM SHOCKS AND STRESSORS

▲Recovery from shocks and stressors[175] →
▲ Enterprise survival and growth[15]
▲ Pricing power[117]
▲ Investment in productive capacities[154]

FIGURE 103. CHANGE IN DEGREE OF RECOVERY BETWEEN 2018 AND 2020

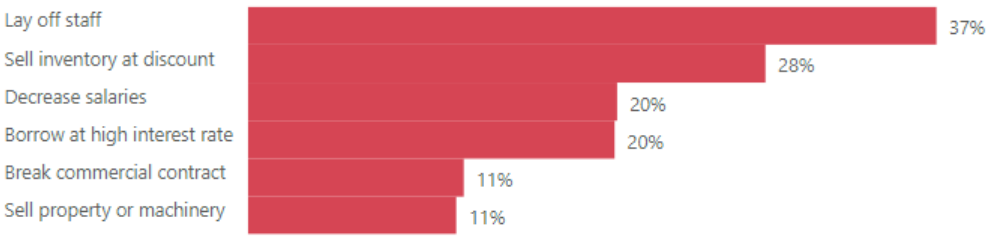
▼ The 2018 Diagnostic collected evidence on the degree of recovery by agroindustry, distributors, hotels, and tourism service enterprises which can be compared to similar profile enterprises for 2020. The average enterprises in 2018 had recovered to same level as before the shock whereas the average enterprise in 2020 had only recovered partially but was worse off than before the shock. Based on this measure, we interpret the degree of recovery declined between 2018 to 2020.

#26 NEGATIVE COPING BEHAVIORS

Ranking #28 Influence ● Dependence ● Centrality ● Change ● Not available

- 65% of enterprises reported resorting to one or more negative coping behaviors. The most frequent coping behavior is to lay-off staff which shifts the risk from enterprise to individuals. [185]
- Negative coping behaviors tend to harm long-term growth of enterprises. Enterprises that resorted to two or more of these behaviors[185] were twice as likely to have collapsed entirely. [175]
- The chain of consequences that result from these coping behaviors cascading from enterprise to individual to household to consumer and back to enterprise are likely to have impact into the future. EXPERT

FIGURE 104. PERCENTAGE OF ENTERPRISES THAT REPORTED RESORTING TO TYPE OF NEGATIVE COPING BEHAVIOR.



- Tourism enterprises – such as lodging, tour operators, food services, arts and entertainment were more likely to lay off or suspend staff and to close their operations than other enterprise profiles. [186]

- The severity of shocks and stressors experienced is the principal determinant of whether enterprises resort to negative coping behaviors.[186] To mitigate coping behaviors then requires minimizing exposure to shocks and stressors through prevention and/or transformational strategies. EXPERT

FIGURE 105. FACTORS NEGATIVE ENTERPRISE COPING BEHAVIORS IS DEPENDENT ON

- Enterprises that resort to negative coping behaviors[185] have significantly less confidence in the future, which in turn decreases enterprise investment in their future productive capabilities.
- The coping behaviors adopted also harm enterprise survival and growth[15] as enterprises lay-off staff[40] [59] or sell important assets needed for future production.

FIGURE 106. FACTORS INFLUENCED BY NEGATIVE ENTERPRISE COPING BEHAVIORS

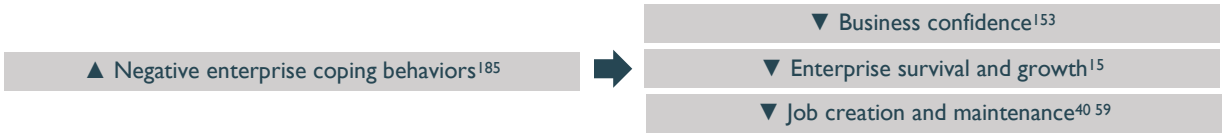


FIGURE 107. CHANGE IN ENTERPRISE COPING BEHAVIORS BETWEEN 2018 AND 2020

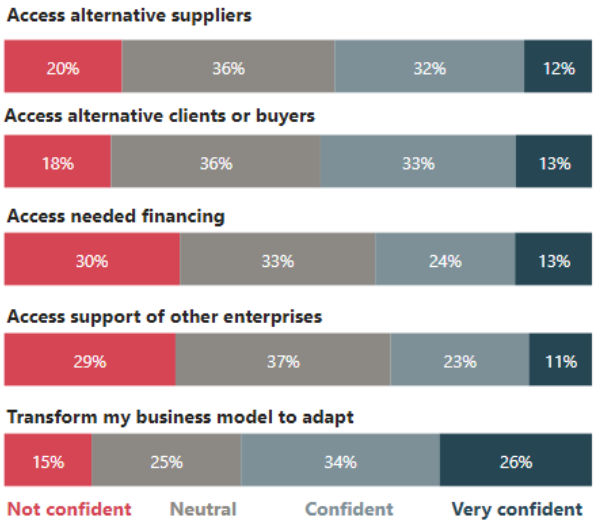
New measures for enterprise coping behaviors were added in the Diagnostic this year. For this reason, a comparison between 2018 and 2020 cannot be made.

#27 BUSINESS RESILIENCE CAPACITIES

Ranking #43 Influence Dependence Centrality Change Not available

- A set of capacities are required by enterprises when faced with a shock or stressor. These so-called resilience capacities are deployed in different contexts to respond to diverse shocks/stressors.
- Enterprises were most confident in their ability to find alternative suppliers[186] and buyers[187] – these are measures of redundancy – as well as their ability to transform their business models to adapt.[190]
- Enterprises were less confident in their ability to access needed financing,[188] and the support of other enterprises – for example to renegotiate contracts, etc. [189]

FIGURE 108. PERCENTAGE OF ENTERPRISES CONFIDENT IN THEIR ABILITY TO DRAW ON RESILIENCE CAPACITIES.



Enterprises were least confident in ability to access financing and the support of other enterprises.

- Business resilience capacities depend on multiple factors from dispute resolution,[120] enterprise linkages, [121] information use,[305] entrepreneurship and innovation,[321] market access[144] and support services.[200]
- Resilience is the product then of multiple other dynamics factors interacting – to build resilience in the system requires shifting these other dynamics so that they enable business resilience capacities. EXPERT

FIGURE 109. FACTORS BUSINESS RESILIENCE CAPACITIES ARE DEPENDENT ON

▲ Dispute resolution[120]
▲ Enterprise linkages / collaboration[121]
▲ Information use[305]
▲ Entrepreneurship and innovation[321]
▲ Market access[144]
▲ Support services[200]

→ ▲ Business resilience capacities[191]

- The more resilience capacities, the more the enterprise is able to recover from shocks and stressors.[175]

FIGURE 110. FACTORS INFLUENCED BY BUSINESS RESILIENCE CAPACITIES

▲ Business resilience capacities[191] → ▲ Recovery from shocks and stressors[175]

FIGURE 111. DIVING DEEPER INTO BUSINESS RESILIENCE CAPACITIES

Given the growing recognition of the importance of resilience to the sustained growth and performance of the Honduran economy, additional analysis and interpretations of the data is presented below. This is based off framework for market systems resilience development by the United States Agency for International Development. REF26

Diversity

- The degree of variety in the economy – of enterprises, products, markets. and industries – with different risk profiles affects how economy deals with shocks and stressors. In a more diverse economy – enterprises and industries are affected and react differently to shocks, which allows the economy to recover faster. EXPERT

[26] Downing, J., Field, M., Ripley, M., Sebtad, J. (2020) Market Systems Resilience: A Framework for Measurement. https://www.usaid.gov. United States Agency for International Development.

- In general, the Honduran economy lacks diversity – and is becoming less diversified over time. One measure for this is the economic complexity index (ECI) which is a proxy measure based on the variety and complexity (or product sophistication) of Honduras's exports. Honduras depends on too few export products. This dependence on a few products makes Honduras vulnerable to market-based shocks that are specific to these products. REF27

Connectivity

- Connectivity can refer to linkages between enterprises. The ability to find alternative buyers and suppliers or access services and support is predictive of enterprise recovery as evidenced by the two factors dispute resolution[120] and enterprise linkages [121] which are predictive of business resilience capacities. Too few enterprises are confident in these linkages – and are isolated and stuck without alternatives, access, or options. EXPERT
- Connectivity can also be physical in the form of roads, electricity services, water and sanitation infrastructure and transport services. The quality of infrastructure[239] can constitute stressors in themselves when quality is low. Enterprises rate the quality of infrastructure in Honduras as poor[239] and since Eta and Iota is likely poorer. EXPERT

Rule of law

- The rules of law and having a level playing field is foundational to how market systems function - the more obstacles reported by enterprises – in paying taxes, obtaining licenses, etc. [231] – the more severe the shock and stressor[174] and the more likely the enterprise is to resort to negative coping strategies to mitigate and recover. [175]
- The rule of law is also tied to levels of informality which increases informal sector competition[256] which is identified as a stressor to formal enterprises. [173] [174] Informal enterprises are also less able to access markets, finance and support services which makes them more vulnerable to shocks and stressors. EXPERT

Power dynamics

- Unfair power dynamics due to discrimination or barriers imposed by more powerful groups harms the ability of the system to recover from shocks, and also tends to further exacerbate social and economic inequalities. EXPERT
- Only 35% of enterprises agreed that competition in their sector is fair and enterprises had the same opportunity to grow. [119] Further 22% of enterprises reported discrimination as frequent within their area. [114] These barriers prevent Honduras from tapping on talent and skills of new entrants and its entire, diverse population. EXPERT

Safety nets

- Safety nets are mechanisms to share risk. Safety nets are essential for enterprises to be able to survive especially severe shocks. Risk can be shared through a variety of formal and informal safety nets. In the second business resilience analysis, data was collected on the use of the various forms of safety nets in response to COVID-19. REF28
- Friends and family are perhaps the most common safety net used in Honduras. In the second business resilience analysis 34% of enterprises reported using this form of safety net. Risk can also be managed through financial instruments, such as insurance. However, only 2% of enterprises reported using insurance in 2020.IBID
- Risk can be shared through supply chains and business partnerships. This form of safety net occurs as business partners may renegotiate a contract, reschedule a payment, etc. While only 8% of enterprises reported using this form of safety net in 2020, those that did reported it as having the most contribution to recovery. IBID
- Risk can be shared through formal, state-based safety nets and relief programs. 72% of enterprises reported using this form of public safety net – it should be noted that many of these measures were simple extensions of payments on taxes and other requirements. Enterprises tended to respond disfavorably that these measures had a significant contribution to the recovery of their business. However, the highest rated government safety nets were financial programs, tax discounts and worker relief programs. IBID

Innovation

[27] The Growth Lab at Harvard University. (2020) The Atlas of Economic Complexity. Retrieved from: https://atlas.cid.harvard.edu/

[28] Institute for Economic and Social Investigation – National Autonomous University of Honduras. Business Resilience Analysis COVID-19. 2020. https://iies.unah.edu.hn/iies/analisis-de-resiliencia-empresarial-covid-19

- Innovation, adaptation, and the pivot are the principal mechanisms used by the private sector to mitigate risks, solve problems, and facilitate recovery in the face of shocks and stressors. Entrepreneurship and innovation[321] was a principal determinant to business resilience capacities[191] and in turn enterprise recovery to shocks. [175]
- The reality is that many enterprises in Honduras struggle to innovate and adapt their business model. There are multiple factors that innovation depends on including enterprise digitalization,[276] fair competition in sector,[119] quality of government administration,[230] access to information[312] and support services.[200]

FIGURE 112. CHANGE IN BUSINESS RESILIENCE CAPACITIES BETWEEN 2018 AND 2020

Not available

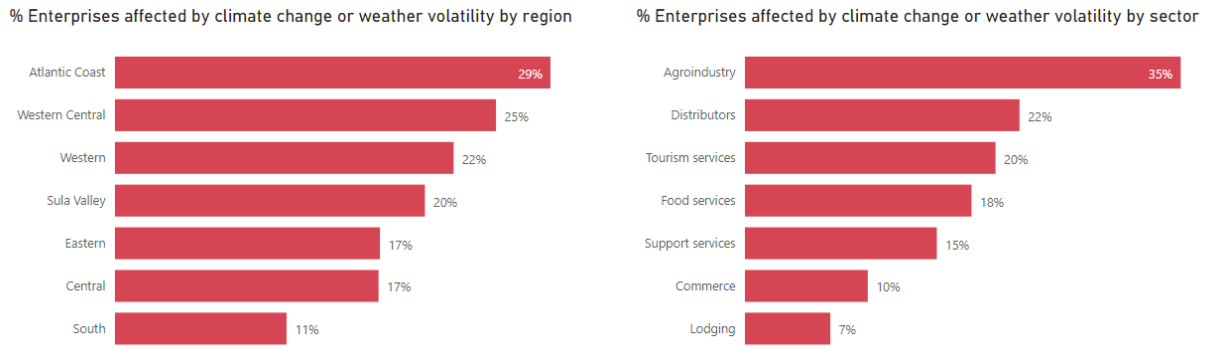
New measures for business resilience capacities were added in the Diagnostic this year. For this reason, a comparison between 2018 and 2020 cannot be made.

#28 CLIMATE CHANGE AND WEATHER VOLATILITY

Ranking #34 Influence Dependence Centrality Change Not available

- The variable climate change was measured in the Diagnostic as a type of shock or stressor that affects enterprises. The Diagnostic measured the percentage of enterprises that reported being affected by climate change and weather volatility. Enterprises in the agricultural sector and located on the Atlantic Coast and in Western Honduras reported being most affected by climate change and weather volatility (note, this survey was completed prior to Hurricanes Eta and Iota).[162]

FIGURE 113. PERCENTAGE OF ENTERPRISES AFFECTED BY CLIMATE CHANGE OR WEATHER VOLATILTIY



- Climate change and weather volatility[162] influences the severity of the shocks and stressors experienced by enterprises. [173] [174] The factors which climate change and weather volatility are dependent on were not analyzed in this Diagnostic.
- Experts identified the growing impacts of climate change and weather volatility and the low preparedness of Honduras. WORKSHOP Honduras is characterized by Notre Dame's Global Adaptation Initiative (ND-GAIN) as high in vulnerability as 67th most vulnerable country in the index and low in readiness as the 28th least ready country in the index out of 181 countries. REF29

[29] Notre Dame's Global Adaptation Initiative (ND-GAIN). (2018). ND-Gain Country Index. Retrieved from https://gain.nd.edu/our-work/country-index/rankings/

FIGURE 114. CHANGE IN CLIMATE CHANGE AND WEATHER VOLATILITY BETWEEN 2018 AND 2020

Not available

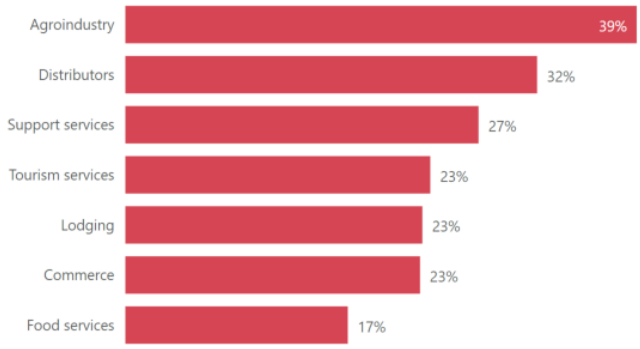
While the 2018 Diagnostic measured the percentage of enterprises that were affected by climate change (41.7%), the 2020 Diagnostic captured data before Hurricanes Eta and Iota so responses reflected only 23.1%. Additional measures are needed to measure climate change and weather volatility. For this reason, a reliable comparison between 2018 and 2020 cannot be made.

#29 MARKET PRICE VOLATILITY

Ranking #35 Influence Dependence Centrality Change

- Market price volatility was measured in the Diagnostic as a type of shock or stressor that affects enterprises. 26% of enterprises reported being affected by a market or price shock in the past year.[163]
- The sectors more likely to experience market or price shocks were agroindustry. [163]

FIGURE 115. PERCENTAGE OF ENTERPRISES AFFECTED BY MARKET OR PRICE SHOCKS IN 2020



- In the Diagnostic enterprises identified the percentage change in price of their primary product or service. These percentages were averaged and displayed in the table below to illustrate the tendency across sectors for the degree to which price volatility would have affected different economic sectors.
- The averaged percentage change of prices of principal products and services decreased by -7.38% in 2020 compared to 2019. In tourism services, this percentage change was nearly doubled the average.[116]

FIGURE 116. AVERAGED PERCENT CHANGE IN PRINCIPAL PRODUCT OR SERVICE REPORTED IN 2020.

Economic Activity	% Change Prices
Tourism services	-15.53
Lodging	-10.73
Agroindustry	-9.57
Support services	-8.76
Food services	-3.18
Commerce	-2.80
Distributors	-2.08
Average Percentage Change	**-7.38**

- Market price volatility[116] influences the severity of the shocks and stressors experienced by enterprises. [173] [174] The factors which market price volatility is dependent on were not analyzed in this Diagnostic.

FIGURE 117. CHANGE IN DEGREE OF RECOVERY BETWEEN 2018 AND 2020

The 2018 Diagnostic collected evidence on the average price change for the primary product or service of agroindustry, distributors, hotels, and tourism service enterprises which can be compared to similar profile enterprises for 2020. The average enterprise in 2018 did not experience a significant price change, whereas in 2020 the average enterprise of this same profile experienced a decrease in prices of their primary product or service by -9.79%. Based on this measure, we interpret that market and price volatility has worsened between 2018 to 2020.

VII. GROWTH AND INVESTMENT

KEY FINDINGS

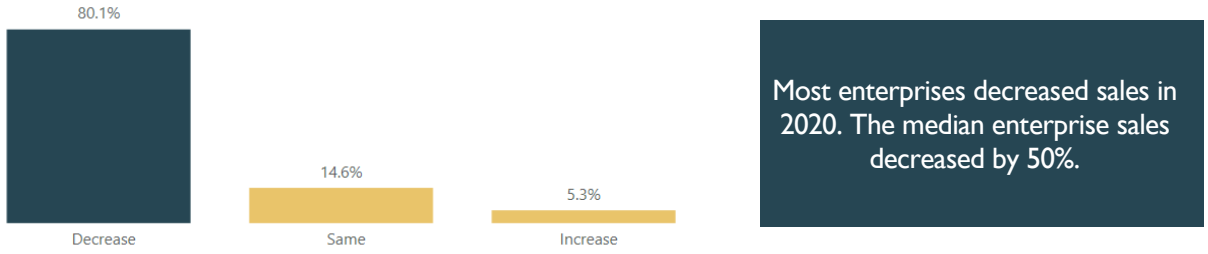
Enterprise growth and investment is the principal determinant of job creation and competitiveness. The more enterprises grow, the more confident they are and more they invest in their productive capacities to grow further. This reinforcing cycle is dependent on multiple factors from levels of innovation, degree of market access, recovery from shocks and a favorable business enabling environment. While growth and investment are goals, they are not high leverage areas to intervene the Honduran market system.

#30 ENTERPRISE SURVIVAL AND GROWTH

Ranking #13 Influence Dependence Centrality Change

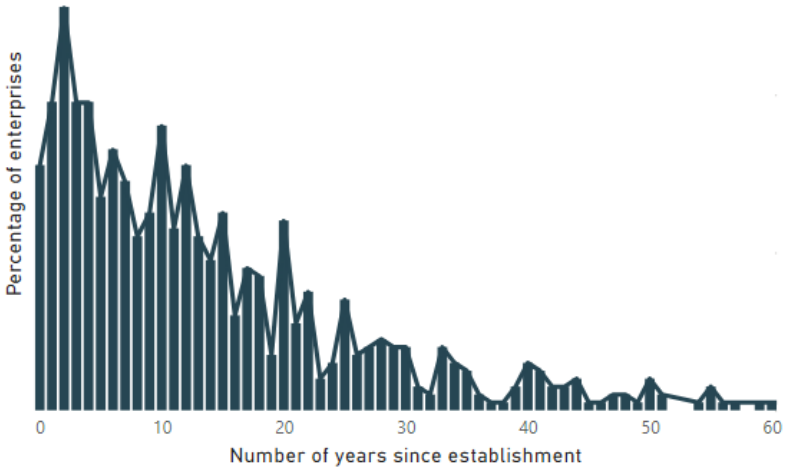
- This past year has illustrated the importance of not only growth, but the enterprise's ability to maintain sales even in the context of a crisis so that the business may survive and maintain jobs.
- 80% of enterprises reported a decrease in sales in 2020 compared to 2019.[15] The median enterprise reported a 50% decrease in sales in 2020 compared to 2019.[15]

FIGURE 118. PERCENTAGE OF ENTERPRISES THAT REPORTED A CHANGE IN SALES IN 2020.



- The median enterprise age of enterprises in the sample is 11 years old. 27% of enterprises were established in the prior five years – or are considered newly established businesses.[1]

FIGURE 119. DISTRIBUTION OF ENTERPRISES BY AGE (NUMBER OF YEARS SINCE STARTING OPERATIONS).



The median enterprise is 11 years old. 27% of enterprises were established in past 5 years.

- Enterprise survival and growth is dependent on levels of entrepreneurship and innovation,[314] the degree of investment,[154] having access to markets,[144] avoidance of coping behaviors in the context of a shock,[185] recovery from shocks and stressors,[175] and the competitiveness of the sector.[149] In addition, experts identified enterprise survival and growth is dependent on pricing power and household incomes.

FIGURE 120. FACTORS ENTERPRISE SURVIVAL AND GROWTH IS DEPENDENT ON

- ▲ Entrepreneurship and innovation[314]
- ▲ Investment in productive capacities[154]
- ▲ Market access[144]
- ▼ Negative enterprise coping behaviors[185]
- ▲ Recovery from shocks and stressors[175]
- ▲ Sector situation / competitiveness[149]
- ▲ Pricing power EXPERT
- ▲ Household incomes EXPERT

→ ▲ Enterprise survival and growth[15 1]

- Enterprises that survive and grow are more confident in future growth,[153] contribute to overall sector competitiveness,[149] are more likely to formalize,[201] and to generate and maintain jobs.[40 59]

FIGURE 121. FACTORS INFLUENCED BY ENTERPRISE SURVIVAL AND GROWTH

▲ Enterprise survival and growth[15] →

- ▲ Business confidence[153]
- ▲ Sector situation / competitiveness[149]
- ▼ Informality[201]
- ▲ Job creation and maintenance[40 59]

FIGURE 122. CHANGE IN ENTERPRISE SURVIVAL AND GROWTH BETWEEN 2018 AND 2020

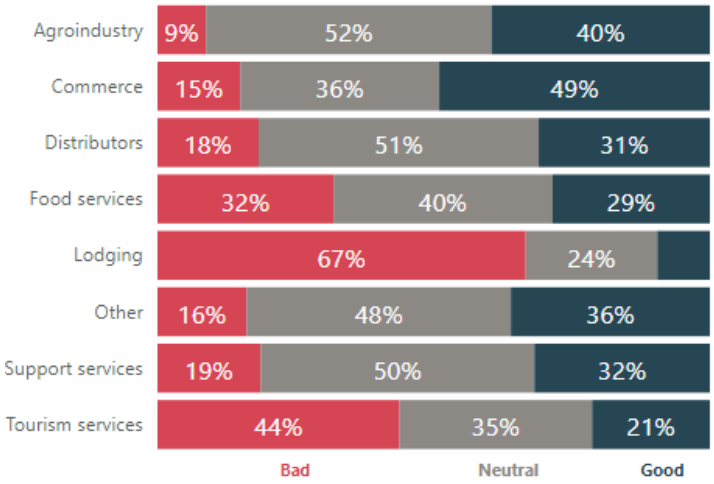
The 2018 Diagnostic collected evidence on the percentage change in sales for agroindustry, distributors, hotels, and tourism service enterprises which can be compared to similar profile enterprises for 2020. In 2018, enterprises reported their sales in 2018 had stayed the same in relation to 2017 with the average reporting a slight decrease of less than -1%. Enterprises of similar profile reported that their sales had decreased by -50% in 2020 in relation to 2019. Based on this measure, we interpret that enterprise survival and growth has worsened between 2018 to 2020.

#31 SECTOR SITUATION / COMPETITIVENESS

Ranking #14 Influence Dependence Centrality Change Not available

- The variable sector situation and competitiveness was measured through perceptions by enterprises on how they considered the current situation of their sector. Enterprises in agroindustry and commerce sectors were generally more positive in their perception of their sector situation, while enterprises in tourism-characteristic activities were generally more negative in their perceptions.[149]

FIGURE 123. PERCENTAGE OF ENTERPRISES CHARACTERIZING THE SITAUTIONS OF THEIR SECTOR AS GOOD



Overall, across sectors, one-third of enterprises considered the situation of their sector "good" while one in four considered "bad."

- Enterprise perceptions on sector situation and competitiveness[149] is dependent on the degree to which enterprises in that sector are surviving and growing.[15]

FIGURE 124. FACTORS SECTOR SITUATION / COMPETITIVENESS IS DEPENDENT ON

▲ Enterprise survival and growth[15] → ▲ Sector situation / competitiveness[149]

- The sector situation and competitiveness[149] similarly influences the degree to which enterprises survive and grow,[15] as well as access markets[308] and support services.[200] The data shows when the situation of the sector is good, enterprises are less likely to experience crime and theft as well.[161]

FIGURE 125. FACTORS INFLUENCED BY SECTOR SITUATION / COMPETITIVENESS

▲ Sector situation / competitiveness[149] →
- ▼ Crime and theft[161]
- ▲ Enterprise survival and growth[15]
- ▲ Market access[308]
- ▲ Support services[200]

FIGURE 126. CHANGE IN SECTOR SITUATION / COMPETITIVENESS BETWEEN 2018 AND 2020

Not available

New measures for sector situation / competitiveness were added to the Diagnostic this year. For this reason, a comparison between 2018 and 2020 cannot be made.

#32 BUSINESS CONFIDENCE

Ranking #42 Influence ● Dependence ● Centrality ● Change ▼

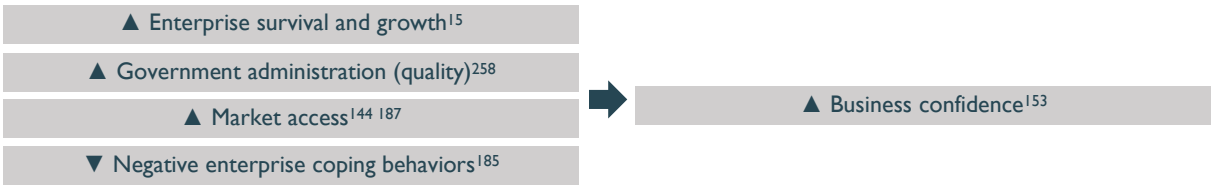
- Business confidence is a leading indicator of business expectations for the next year. It measures opinions on levels of production, orders, and stocks in the industry sector as well as employment.
- Nearly two-thirds of enterprises report customer demand is lower than normal.[144] However, nearly 4 out of 5 enterprises are confident that 2021 will be better than 2020[148] with most expecting to increase production in 2021 compared to 2020.[143] At the same time, enterprise confidence in creating jobs is generally more pessimistic which suggests that job recovery may be slower in the next year.[146]

FIGURE 127. BUSINESS CONFIDENCE INDICATORS FOR ENTERPRISES IN 2020

Despite the current low demand and bad situation of enterprises, most are confident that 2021 will be a better year than 2020.

- Business confidence is dependent on multiple factors including enterprise survival and growth[15], the quality of government administration[258], access to markets,[144] [187] and whether the enterprise had to resort to negative coping behaviors during a shock or stressor.[185]

FIGURE 128. FACTORS BUSINESS CONFIDENCE IS DEPENDENT ON



- Business confidence[152] is the leading indicator of investment i.e., the more confident in the future, the more enterprises are willing to invest to expand their productive capacities.[154]

FIGURE 129. FACTORS INFLUENCED BY BUSINESS CONFIDENCE

FIGURE 130. CHANGE IN BUSINESS CONFIDENCE BETWEEN 2018 AND 2020

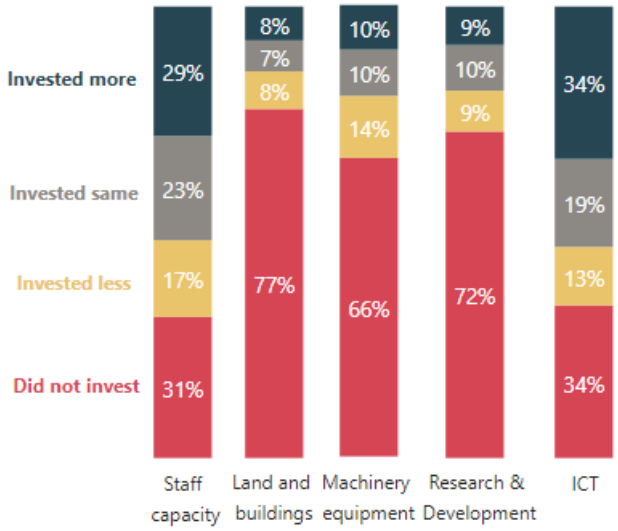
The 2018 Diagnostic collected evidence on business confidence for agroindustry, distributors, hotels, and tourism service enterprises which can be compared to similar profile enterprises for 2020. Business confidence index scores are normalized to a 0-200 scale where 0 is no confidence, 100 is neutral, and 200 is high confidence. In 2018 enterprises had an average score of 141 out of 200. In 2020 the same profile enterprises had a score of 130. Across all categories, there was a significant drop in business confidence in 2020 over 2018. Based on this measure, we interpret that business confidence has worsened between 2018 to 2020.

#33 INVESTMENT IN PRODUCTIVE CAPACITIES

Ranking #23 Influence Dependence Centrality Change

- Investment made by an enterprise is the purchase of any long-term productive asset, whether tangible or intangible. Tangible assets include property, plant, and equipment. Intangible assets include technical innovations, brand image or the technical capacity of the workforce.
- Two-thirds of enterprises did not invest in 2020 or invested less in 2020 than they did in 2019. [154]
- However, enterprises tended to invest more in staff capacity and Information and communication technologies (ICT) this year – notably in response to adaptations made in the face of COVID-19. [154]
- Enterprises identified the pay-off of investments related to employee training which improves quality of customer service and has a positive effect on enterprise sales and profits. WORKSHOPS
- Enterprises tended not to make capital investments this year in land, buildings, machinery, and equipment. And fewer enterprises invested in research and development. The lack of investment in these forms of productive capital may suggest that levels of productivity may plateau or decline. EXPERT

FIGURE 131. LEVELS OF INVESTMENT BY ENTERPRISES IN 2020 IN COMPARISON TO 2019



Overall, enterprises reported investing less in 2020 than 2019, except in ICT and staff training.

- The level of investment is dependent on degree of business confidence in the future[153], the strength of commercial linkages and collaboration[121] [140] and enterprise recovery from shocks.[175]

FIGURE 132. FACTORS INVESTMENT IN PRODUCTIVE CAPACITIES IS DEPENDENT ON

▲ Business confidence[153]
▲ Enterprise linkages / collaboration [121] [140]
▲ Recovery from shocks and stressors[175]
▲ Access to finance EXPERT
▲ Tax burden EXPERT

→ ▲ Investment in productive capacities[154]

- Investment in productive capacity is primarily tied to enterprise survival and growth.[15] Companies need to invest not only to replace existing capacity but to expand capacity to grow.

FIGURE 133. FACTORS INFLUENCED BY INVESTMENT IN PRODUCTIVE CAPACITIES

▲ Investment in productive capacities[154] → ▲ Enterprise survival and growth[15]

The market is always changing, so we always have to change. We have to update, always invest in our people and in their capabilities. – Tourism enterprise owner, San Pedro Sula

FIGURE 134. CHANGE IN INVESTMENT IN PRODUCTIVE CAPACITIES BETWEEN 2018 AND 2020

The 2018 Diagnostic collected evidence on investment in productive capacities for agroindustry, distributors, hotels, and tourism service enterprises which can be compared to similar profile enterprises for 2020. The 2018 Diagnostic found the average enterprise invested the same in 2018 as 2017. However, the 2020 Diagnostic found the average Honduran enterprises invested less in 2020 than they did in 2019. Based on this measure, we interpret that investment in productive capacities has worsened between 2018 to 2020.

VIII. INCLUSIVE ECONOMIC OPPORTUNITIES

KEY FINDINGS

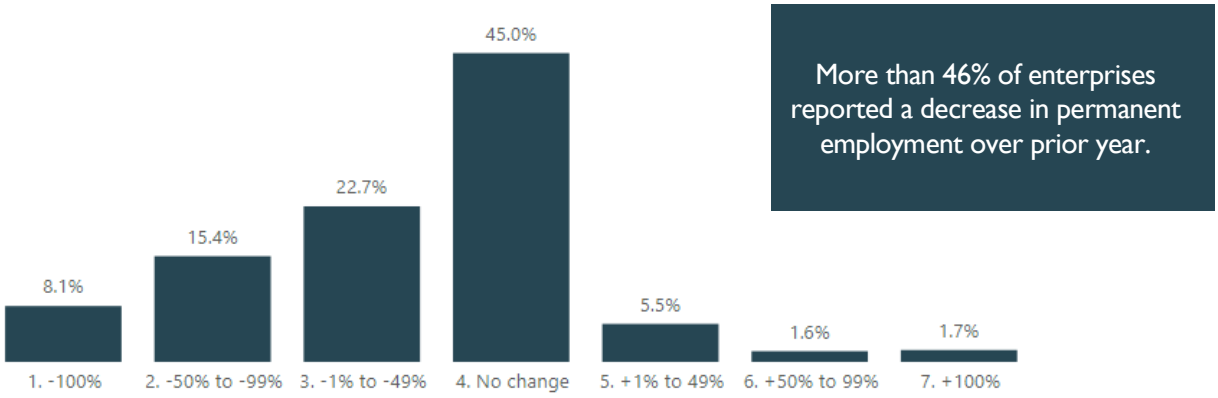
The key to more inclusive economic opportunities is more paid jobs. There is a real deficit of paid jobs in the Honduran economy, evidenced by high levels of self-employment and underemployment, both visible and invisible. More jobs requires significantly higher levels of enterprise survival and growth as well as start-up. There are a multitude of reasons why this is not happening evidenced in the above dynamics. However, even with more paid jobs there are barriers for specific populations to be able to access economic opportunities. Addressing issues of discrimination, workforce participation and equal pay requires shifting cultural norms within broader Honduran society. Promoting women and youth entrepreneurs is one avenue to support inclusive access to economic opportunities. There is a virtuous dynamic when people have access to jobs which is associated with lower rates of crime and theft, reduced incentives for external migration, as well as increased wages which households may spend in the economy to generate more jobs.

#34 JOB CREATION AND MAINTENANCE

Ranking #39 Influence ● Dependence ● Centrality ● Change ▼

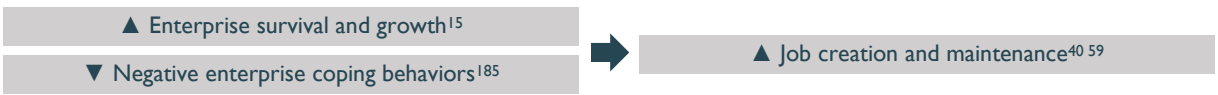
- The number of permanent jobs by enterprises decreased by -9.24% in 2020 in comparison to 2019. [40]
- Only 8.8% of enterprises reported an increase in permanent employees in 2020. While 45% reported no change in employment, 46.2% of enterprises reported a decrease of permanent enterprises in 2020. [40]
- The median enterprise had 6 permanent employees in 2019[23] and in 2020 had 5 permanent employees. [36]

FIGURE 135. PERCENTAGE CHANGE IN PERMANENT EMPLOYMENT IN 2020 COMPARED TO 2019



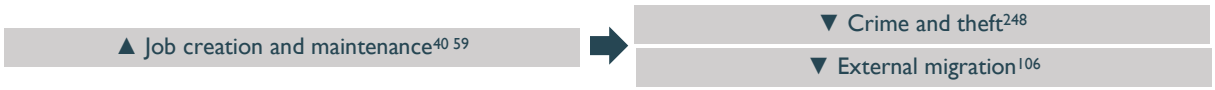
- Only 11% of enterprises reported an increase in temporary employees in 2020. While 40.6% reported no change in number of temporary employees, 48.4% of enterprises reported a decrease in temporary jobs.[41]
- For enterprises which reported having both temporary and permanent employees, temporary employees were more likely than permanent employees to be laid-off or suspended than permanent employees.[41]
- Job creation and maintenance[40 59] depends on whether the enterprise survives and grows[15] and whether the enterprise can avoid resorting to negative coping behaviors in the context of a shock or stressor.[185] In other words, job creation and maintenance requires enterprises to be both competitive and resilient.

FIGURE 136. FACTORS JOB CREATION AND MAINTENANCE IS DEPENDENT ON



- Job creation and maintenance[40 59] influences the level of crime and theft there is an area[248] and the likelihood that individuals are to migrate externally outside of Honduras.[106]

FIGURE 137. FACTORS INFLUENCED BY JOB CREATION AND MAINTENANCE



- Temporary, part-time, or self-employed work is characteristic of precarious or insecure work. Participation in more stable, better paying, and productive employment is identified as one of more important mechanisms for increasing household incomes and sustainably reducing poverty. WORKSHOPS

FIGURE 138. CHANGE IN JOB CREATION AND MAINTENANCE BETWEEN 2018 AND 2020

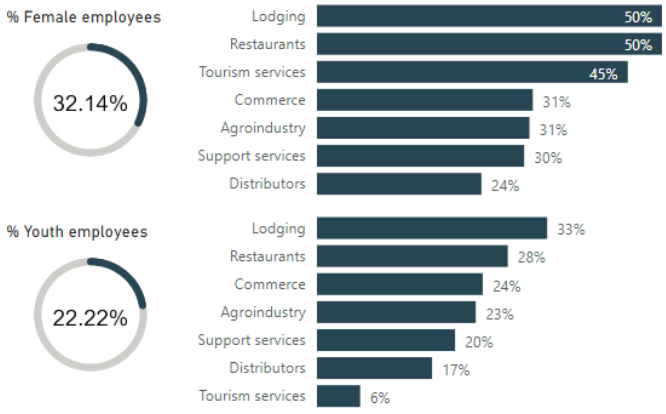
The 2018 Diagnostic collected evidence on the change in permanent employment for agroindustry, distributors, hotels, and tourism service enterprises which can be compared to similar profile enterprises for 2020. The percentage change in permanent employees was - 0.08% in 2018. The percentage change in 2020 was -15.20% for the same profile enterprises. By sector, agroindustry reported a decline of -15.06%, distributors a decline of -3.16%, lodging a decline of -37.34% and tourism services a decline of -21.79% of permanent employees. Based on this measure, we interpret that job creation and maintenance has worsened between 2018 to 2020.

#35 INCLUSIVE ACCESS TO JOBS

Ranking #18 Influence Dependence Centrality Change

- In Honduras, women and youth make up 41.4% and 58.97% of the economically active population in total. However, employment rates of women and youth are only 32% and 22% of enterprise sample. [63 64]
- This is evidence of gender and age-based disparities in specific industries. Generally, lodging and food services are more inclusive, while agroindustry, distribution and commerce are less inclusive. [63 64]
- Enterprises noted that across productive sectors, gender roles are defined in terms of the types of activities that are performed by men and those that are performed by women. WORKSHOPS

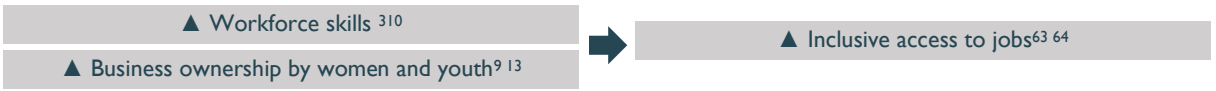
FIGURE 139. PERCENTAGE OF EMPLOYEES WHO ARE WOMEN OR YOUTH BY INDUSTRY.



Women and youth have unequal levels of participation in the workforce than men and adults.

- The two principal determinants of inclusive access to jobs by women and youth [63 64] are whether youth and women have required workforce skills[310] and whether the business is owned by women or youth.[9 13]

FIGURE 140. FACTORS INCLUSIVE ACCESS TO JOBS IS DEPENDENT ON



- More inclusive access to jobs[63 64] influences the degree of equitable pay in the sector (and thus reduces the gender wage gap) [115] and leads to increased business ownership by women and youth. [9 11] Experts identify the reasons for this is that employment is considered a pathway to gaining experience and skills needed for promotion as well as for individuals who may choose to start their own business. EXPERT

FIGURE 141. FACTORS INFLUENCED BY INCLUSIVE ACCESS TO JOBS

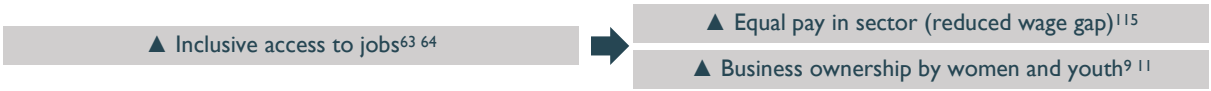


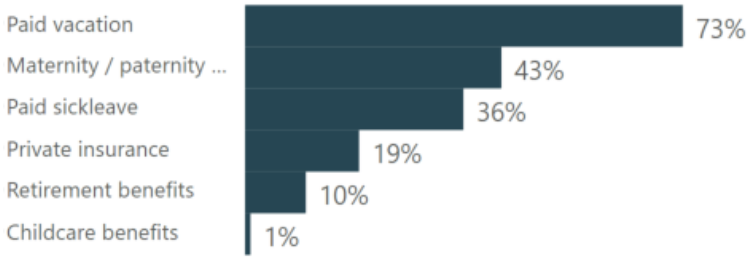
FIGURE 142. CHANGE IN INLCUSIVE ACCESS TO JOBS BETWEEN 2018 AND 2020

The percentage of youth and women employed varies significantly by sector, by business ownership and other factors. For this reason, comparing samples between 2018 and 2020 surveys is difficult. The 2020 Diagnostic asked sex and age of employees for both 2019 and 2020 which allows us to make a paired comparison.. Excluding enterprises that did not respond to both years, the percentage of women employed in these enterprises declined 41% in 2019 to 36% in 2020. This difference is statistically significant. Similarly, the percentage of youth employed in these enterprises declined 34.5% in 2019 to 29.7% in 2020. Based on this measure, we interpret inclusive access to jobs has worsened between 2018 to 2020.

JOB QUALITY

- The median enterprise offered one of the following non-wage benefits to staff in the past year. The most common benefits offered were paid vacation, maternity and paternity, and sick leave.[87]

FIGURE 143. PERCENTAGE OF ENTERPRISES OFFERING TYPE OF NON-WAGE BENEFIT



- In addition to the above non-wage benefits, 55% of enterprises made contributions into Social Security,[74] 84% reported offering the minimum wage to their employees,[75] and 27% reported contributions to the Private Contributions Regime (RAP).[82]

FIGURE 144. PERCENTAGE OF ENTERPRISES OFFERING WRITTEN AGREEMENTS BY TYPE OF EMPLOYMENT

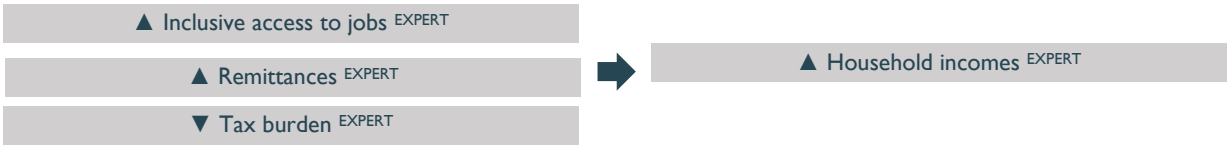
- Interactions between the variable job quality and other variables were not measured this year due to the effects of COVID-19 which had significantly disrupted the employment status of workers.

#36 HOUSEHOLD INCOMES

Ranking #20 Influence Dependence Centrality Change Not available

- Household incomes were not directly measured by the Diagnostic but was added as a variable by experts to explain the interactions with other factors. Secondary sources provide data on household incomes.
- The gross national income per capita in current USD is $2,390 as of 2019. This is above the middle-income average of $2,176 but less than the LAC average of $8,373. The distribution of incomes is highly unequal, with a Gini Index of 48.2 which is one of the highest in the LAC region. REF 30
- Using the poverty rate measure for a low middle-income of $3.20 a day (2011 PPP). it is estimated that 29% of Hondurans live in poverty by this measure in 2019. Using the official national poverty-line for Honduras, 48.3% of Honduras live below the poverty line. REF 31
- Experts identified Honduras household incomes are dependent on earnings from inclusive access to jobs, remittances received as well as the level of tax burden on earnings. EXPERT

FIGURE 145. FACTORS HOUSEHOLD INCOMES IS DEPENDENT ON



- Household incomes influence expenditures on education as well as consumption of products and services of enterprises which in turn increases enterprises survival and growth. EXPERT

FIGURE 146. FACTORS INFLUENCED BY HOUSEHOLD INCOMES

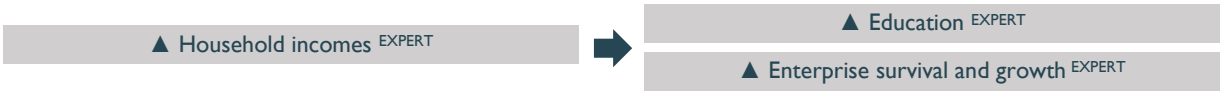


FIGURE 147. CHANGE IN HOUSEHOLD INCOMES BETWEEN 2018 AND 2020

Not available

New measures Data for household incomes comes from secondary sources which were not updated for 2020. For this reason, a comparison between 2018 and 2020 cannot be made.

#37 BUSINESS OWNERSHIP WOMEN AND YOUTH

Ranking #38 Influence Dependence Centrality Change Not available

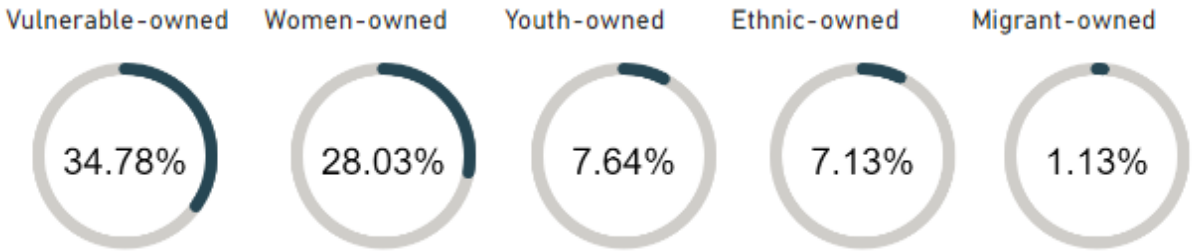
- Persons from vulnerable groups are persons who experience or are at risk of higher poverty and economic and social exclusion than the general population. Women, youth, LGBTI, indigenous, Afro-descent or returned migrants are identified as persons within this category because for various reasons these persons experience or are more vulnerable to human rights abuses, structural discrimination, and/or various other forms of oppression that put them at higher risk of economic and social exclusion.

[30] The World Bank Group. Retrieved from https://data.worldbank.org/
[31] The World Bank Group. Retrieved from https://data.worldbank.org/

- 34.78% of enterprises are owned by persons from vulnerable groups.[13] Enterprise ownership considers that at least 51% of the owners are from one or more vulnerable groups.
- Enterprises noted that many enterprises owned by women are carried out of necessity – and not necessarily based on opportunity – which makes for less dynamic growth by these enterprises. WORKSHOPS

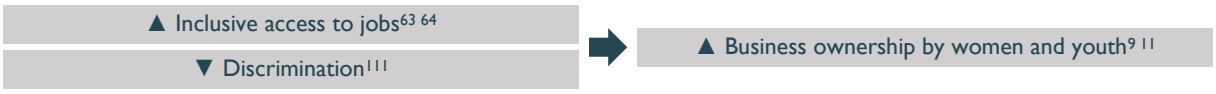
Women tend to be more cautious about investment. They are less willing to go to the bank. They do not gamble and try not to risk so much as enterprises owned by men. – Women agricultural enterprise owner, San Pedro Sula

FIGURE 148. PERCENTAGE OF ENTERPRISES OWNED BY PERSONS FROM VULNERABLE GROUPS IN HONDURAS.



- The more inclusive access women and youth have to job opportunities, the greater enterprise ownership by women and youth. Jobs are considered a pathway to gaining experience to start a business.[9] [11]
- Discrimination is a barrier that stands in the way of women operating their businesses – specifically the barrier noted when women are passed over promotions or management positions for men. 9 11 Discrimination is interpreted to prevent women from gaining experience to start their business. EXPERT

FIGURE 149. FACTORS BUSINESS OWNERSHIP BY WOMEN AND YOUTH IS DEPENDENT ON



- Enterprises that are owned by women and youth[9] [13] are more likely to provide inclusive access to jobs to other women and youth.[63]

FIGURE 150. FACTORS INFLUENCED BY BUSINESS OWNERSHIP BY WOMEN AND YOUTH

"I see in Santa Rosa de Copan; the youth are super creative. They are creating new economic activities." – Tourism enterprise owner, Santa Rose de Copan

FIGURE 151. CHANGE IN BUSINESS OWNERSHIP WOMEN AND YOUTH BETWEEN 2018 AND 2020

Not available

There was a higher representation of women-owned businesses in the sample for 2020 compared to 2018. However, broader inferences cannot be made about changes in the levels of ownership in the Honduran economy by women and youth between 2018 and 2020.

#38 EQUAL PAY AND #39 DISCRIMINATION

Equal pay

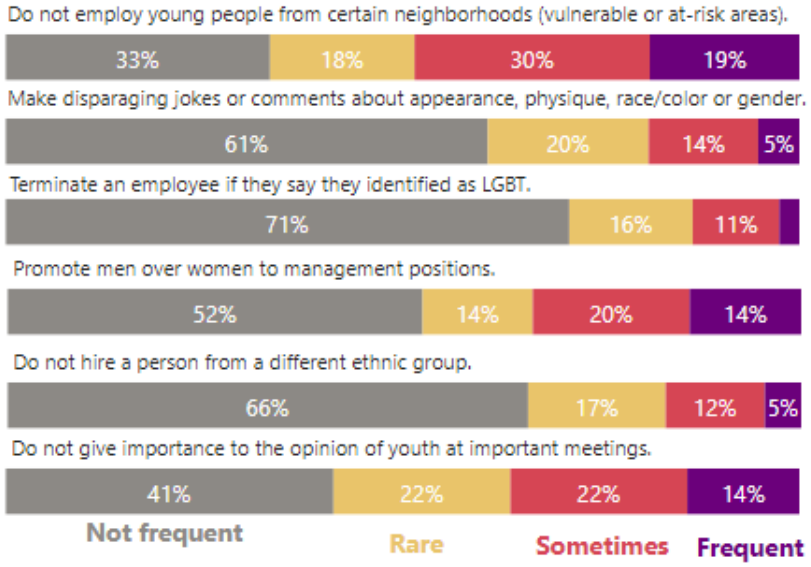
Ranking	#37	Influence	Dependence	Centrality	Change	Not available

Discrimination

Ranking	#19	Influence	Dependence	Centrality	Change	Not available

- 22% of enterprises report that one or more forms of discrimination are frequent in their area.[114]
- Youth are especially likely to face discrimination in hiring[108] and are less likely to be meaningfully engaged in meetings.[113] Women are more likely to face barriers to promotion to managerial positions.[111]

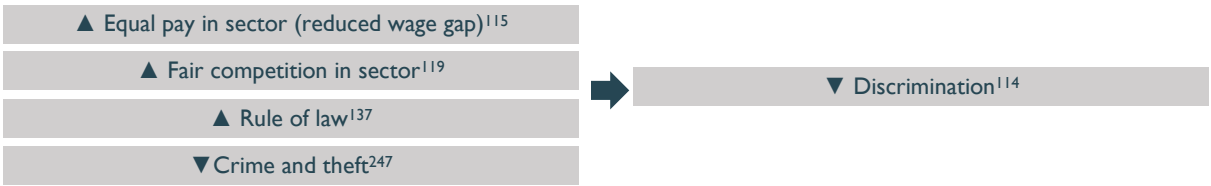
FIGURE 152. PERCENTAGE OF ENTERPRISES THAT RESPOND DISCRIMINATION IS FREQUENT IN THEIR AREA.



"Although women have the capacity to take on these executive positions, they don't give them to us. They look for men to carry out those roles". – Woman enterprise owner, Choloma

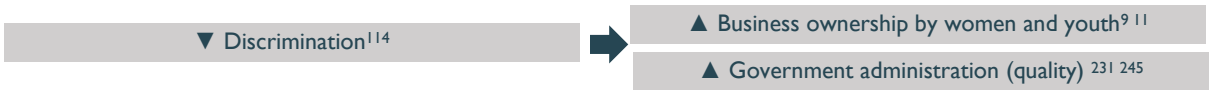
- The more equal pay in the sector, i.e. there is a reduced wage gap between men and women,[115] the less discrimination against women there is in the sector.[114] This finding suggests that greater equity reduces negative gender stereotypes in the workplace which in turn reduces discrimination. EXPERT
- The fairer the competition in the sector,[119] the less frequent is discrimination.[114] This finding suggests that in the market system, a sense of fairness is tied to the sense of equality. EXPERT
- The stronger the institutions and rule of law, notably the judiciary system in Honduras,[137] the less frequent discrimination[114] emphasizing the influence of formal rules and norms on reducing discrimination.
- The less crime and theft in a community[247] the less frequent discrimination[114] particularly for youth who are discriminated against for being from a neighborhood with gangs and high crime levels.[108]

FIGURE 153. FACTORS DISCRMINATION IS DEPENDENT ON



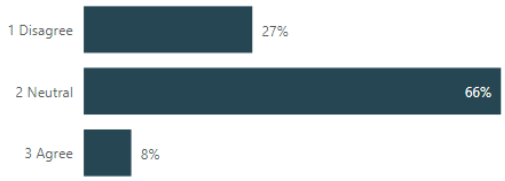
- Reducing discrimination[114] increases women and youth business ownership[9 11] and improves the quality of government administration.[231 245] Discrimination is interpreted to harm the ability of women, youth, and other persons from vulnerable groups to operate their businesses and to access critical public services needed to formalize and grow their business. EXPERT

FIGURE 154. FACTORS INFLUENCED BY DISCRMINATION



- Respondents are three times more likely to disagree than to agree that women earn equivalent wages as men (though most are respondents are neutral) evidence of a gender wage gap in Honduras.[115]
- The World Economic Forum's Gender Gap Index ranked Honduras 55 out of 153 countries in economic participation and opportunity. The factors which held Honduras back related to low labor force participation (Honduras ranked 127) and high wage inequality for similar work (Honduras ranked 103).[32]

FIGURE 155. PERCENTAGE OF RESPONDENTS THAT AGREE WOMEN EARN EQUIVALENT TO MEN IN THEIR SECTOR.



Respondents tend to disagree that women earn the same wage for similar work

In our company we are hiring more youth. Youth are motivated not just by wages but by learning and trying different things. I think it is easier to lead a team of youth people who can be molded. – Enterprise owner, Choloma

FIGURE 156. CHANGE IN EQUAL PAY AND DISCRIMINATION BETWEEN 2018 AND 2020

Not available

New measures for equal pay and discrimination were added to the Diagnostic this year. For this reason, a comparison between 2018 and 2020 cannot be made.

IX. WORKFORCE AND LABOR MARKETS

KEY FINDINGS

The analysis reveals issues with both supply and demand for labor. In terms of demand, the private sector is not generating sufficient levels of paid jobs. The reasons for this are deep-rooted and stem from other dynamics analyzed above. This lack of paid jobs has the effect of motivating migration of skilled workers to search for jobs elsewhere. On the supply side of skilled labor, a significant number of enterprises identified skills gaps on the part of existing and prospective employees. This has the effect of limiting innovation and degree of entrepreneurship of Honduran enterprises. Enterprises are investing to fill this skills gap, but stakeholders suggest a more functional educational and vocational training system is needed.

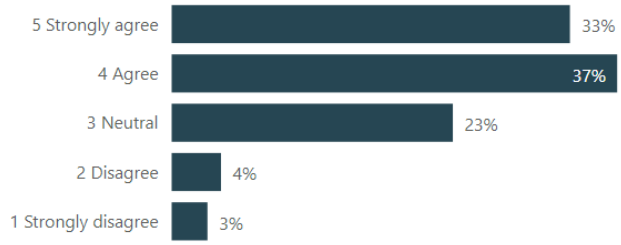
[32] The Global Gender Gap Report 2020. World Economic Forum 2019.

#40 WORKFORCE SKILLS

Ranking #11 Influence ● Dependence ● Centrality ● Change Not available

- Workforce skills refer to both hard skills - the ability to perform a particular task - as well as soft skills - social and interpersonal skills to get along with coworkers and customers.
- 70% of enterprises report that they have the qualified workforce required to compete in their principal markets[97] and 66% consider they have skilled employees to grow their business.[310]

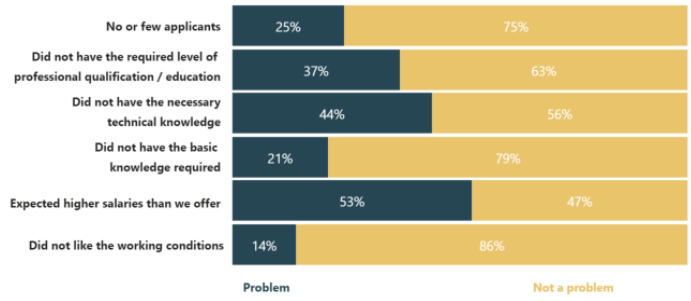
FIGURE 157. PERCENTAGE OF ENTERPRISES THAT AGREE THEY HAVE THE SKILLED WORKFORCE THEY NEED TO COMPETE IN THEIR PRINCIPAL MARKETS.



Enterprises tend agree they have the workforce to compete and grow but more than 30% do not agree.

- 41% of enterprises hired permanent employees in 2020.[89] Of those enterprises that hired permanent employees, 39% identified difficulty in hiring applicants to available positions. [90]
- The main difficulty reported by enterprises was that salary expectations were higher than offered.[95] The second most frequent difficulty is that the employee lacked technical skills. [93]

FIGURE 158. PERCENTAGE OF ENTERPRISES THAT INDICATE PROBLEMS IN HIRING PERMANENT EMPLOYEES.



The principal reason enterprises reported difficulty hiring was that salary expectations were higher than offered by the enterprise.

We have reached the situation that the young person, even if he/she has graduated from school has to go through another training process before being hired in companies because he/she does not have the skills.
– Enterprise owner, Chololoma

- Enterprises that were able to hire employees with basic and technical skills and that invested in the training of their employees reported their employees had necessary skills to compete and grow.[97] [310]
- Enterprises that reported talented individuals in their area migrated to other areas to find work were more likely to indicate that their employees lacked the skills needed to compete and grow. [97] [310]

FIGURE 159. FACTORS WORKFORCE SKILLS IS DEPENDENT ON

▲ Education[90]
▼ External migration[107]
▲ Investment in workforce[99]
→ ▲ Workforce skills [97] [310]

- Workforce skills[97] [310] are a determinant of employment of women and youth. [63] [64] Inclusive access to jobs requires that vulnerable populations have technical skills and qualifications to access employment.

- Enterprises that are more entrepreneurial and innovative[321] [322] have more skilled workforces. [97] [310]

FIGURE 160. FACTORS INFLUENCED BY WORKFORCE SKILLS

- Enterprises note that high levels of internal migration to Honduran cities reduces labor availability in rural areas for agricultural production which affects production of crops such as coffee. WORKSHOPS

Nobody is prepared to be an employee, and nobody is prepared to be an entrepreneur. This is one of the biggest problems the country has. – Tourism enterprise owner, La Ceiba

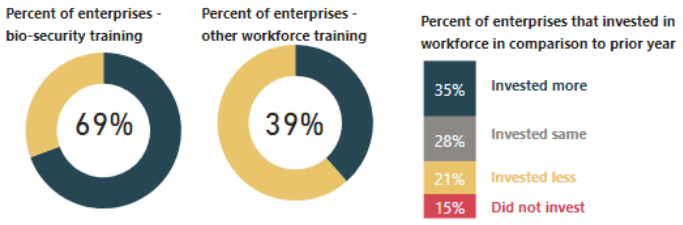
FIGURE 161. CHANGE IN WORKFORCE SKILLS BETWEEN 2018 AND 2020

New measures for workforce skills were added in the Diagnostic this year. For this reason, a comparison between 2018 and 2020 cannot be made.

WORKFORCE TRAINING

- Investment in workforce capacity and skills is a disaggregate of the variable investment in productive capacities[154] which is analyzed in the growth and investment dynamic. Further analysis is provided below given the evident importance of this variable for the workforce skills variable.
- 76% of enterprises provided some form of workforce training to their employees. Most of this training consisted of biosecurity practices necessary to maintain operations or reopen during COVID-19.[99] [100]
- Approximately 83% of the Honduran workforce received biosecurity training in 2020 and 26% of the Honduran workforce received some other form of professional training.[101] [102]

FIGURE 162. PERCENTAGE OF ENTERPRISES THAT PROVIDED WORKFORCE TRAINING TO EMPLOYEES.



Most enterprises are investing in workforce training to improve the skills of their employees.

We are constantly training all staff. They are in constant training to improve innovation, training on entrepreneurship because in other countries they are already ahead of us. – Women enterprise owner, Choloma

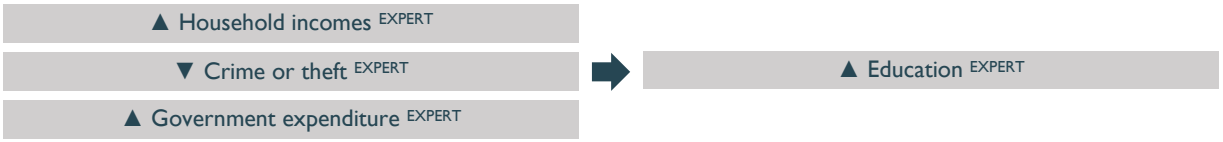
- 86% of enterprises the past year used external workforce training support to provide capacity building for their staff. Enterprises responded favorably these services had significant contribution to their business.[193]
- It should be noted this year that COVID-19 increased the demand and offer for staff capacity training services in themes related to biosecurity, remote work, and e-commerce. EXPERT
- Enterprises identified the reason why they do not invest more in workforce training is high staff turnover – they lose that investment if the employee leaves to migrate or take another job. WORKSHOPS

#41 EDUCATION

Ranking #21 Influence Dependence Centrality Change Not available

- Education is not a variable that was directly measured by the Diagnostic but was added by experts.. A stakeholder workshop on the topic of education revealed the topic as too complex to analyze sufficiently within the scope of this Diagnostic. For this reason, only the direct interactions identified in the Diagnostic are shared below.
- While many factors which influenced education were touched-on in stakeholder workshops, the principal determinants identified were poverty (a function of incomes), particularly in rural areas, as well as levels of crime and violence, particularly in urban areas which influenced student drop-out. Further, it was acknowledged that government expenditure in education had declined which has to a degree affected educational outcomes. EXPERT

FIGURE 163. FACTORS EDUCATION IS DEPENDENT ON



- While there are many benefits of education, the other primary Diagnostic factors education tied to education where workforce skills and the strength of Honduran democracy and governance. EXPERT

FIGURE 164. FACTORS INFLUENCED BY EDUCATION

FIGURE 165. CHANGE IN EDUCATION BETWEEN 2018 AND 2020

Not available

Education considers multiple factors which are beyond the scope of this Diagnostic. For this reason, no measure of change is provided in this Diagnostic.

#42 EXTERNAL MIGRATION AND #43 REMITTANCES

External migration

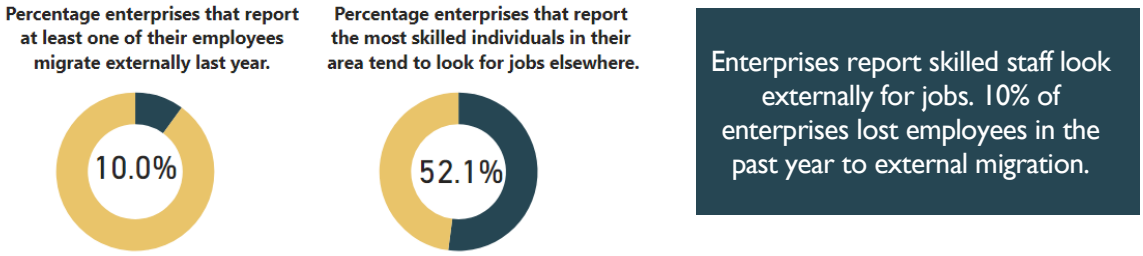
Ranking #32 Influence Dependence Centrality Change Not available

Remittances

Ranking #29 Influence Dependence Centrality Change ▲

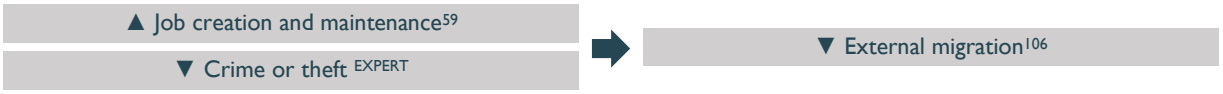
- 10% of enterprises reported that at least 1 employee had migrated externally in the past year.[106]
- More than half of enterprises reported that the most skilled individuals in their area normally migrate to find job opportunities outside of their geographic area i.e. there is human capital flight.[107]

FIGURE 166. PERCENTAGE OF ENTERPRISES THAT REPORT EMPLOYEES MIGRATED EXTERNALLY



- The more jobs that are created and maintained i.e. not laid off or suspended, the less external migration that is reported by enterprises indicating economic opportunities are the primary cause of migration. [106]

FIGURE 167. FACTORS EXTERNAL MIGRATION IS DEPENDENT ON



- Enterprises report that when youth cannot find a job due to lack of qualifications, lack of jobs or low wages or else they consider the social conditions in Honduras undesirable, they migrate. WORKSHOPS
- Precarious employment – employment that is temporary, informal, and/or seasonal – as opposed to more secure, full-time, and permanent employment – is also tied to external migration. WORKSHOPS

When it comes to hourly employment and temporary employment then that employees leaves in a caravan.
– Enteprrise owner, La Ceiba

FIGURE 168. CHANGE IN EXTERNAL MIGRATION BETWEEN 2018 AND 2020

Not available

The percentage of enterprises that reported at least one employee had migrated externally in the last year decreased from 19.5% in 2018 to 7.9% in 2020 for agroindustry, distributors, hotels, and tourism service enterprises. However, given the higher number of employees laid off that are as evidence has shown likely to migrate, this enterprise-level perspective into migration is considered insufficient to draw a conclusion with respect to changes in external migration. For this reason, no measure of change is provided in this Diagnostic.

FIGURE 169. CHANGE IN REMITTANCES BETWEEN 2018 AND 2020

According to the Central American Monetary Council, [REF33] the accumulated net remittances to Honduran households were $4.779 billion in 2018. In 2020, remittances to Honduran households grew to $5.655 billion. Based on this measure, remittances have increased from 2018 to 2020.

[33] Central American Monetary Council. Retrieved from http://www.secmca.org/.

ANNEX I. INDICATORS

#	Indicator Definition
1	The median number of years since the enterprise established operations in Honduras
5	The percentage of enterprise owners who are women
8	The percentage of enterprises owners who are returned migrants
9	The percentage of women-owned enterprises (51% of owners are women)
11	The percentage of youth-owned enterprises (51% of owners are youth)
13	The percentage of vulnerable group-owned enterprises (51% of owners are from vulnerable groups)
14	The percentage of enterprises which are family-owned
15	The percentage change in sales in 2020 in comparison to 2019
21	The percentage of sales to export markets in the past year
23	The number of permanent employees in 2019
36	The number of total employees in 2020
40	The percentage change in permanent employees over the past year
41	The percentage change in temporary employees in the past year
59	The percentage of permanent employees suspended or laid-off in the past year
63	The percentage of female employees
64	The percentage of youth (15-29 yo) employees
87	The number of non-wage benefits offered in the past year to most employees
89	The percentage of enterprises offering contracts to permanent employees
90	The percentage of enterprises that encountered a problem hiring permanent employees in the past year
93	The percentage of enterprises that report applicants lacked basic knowledge required
95	The percentage of enterprises that report applicants wanted higher salaries than offered
97	The degree of agreement that enterprises have skilled workforce to compete in principal markets
99	The percentage of enterprises that provided workforce training to staff in the past year
100	The percentage of enterprises that provided biosecurity training to staff in the past year
101	The percentage of employees trained in biosecurity in the past year
102	The percentage of employees that received workforce training in the past year
106	The percentage of enterprises that report employees migrated abroad in the past year
107	The percentage of enterprises that report it is common for most skilled to migrate elsewhere for work
108	The degree of perceived discrimination against youth from certain neighborhoods
111	The degree of perceived discrimination in promoting men above women
113	The degree of perceived discrimination in youth participation in meeting
114	Discrimination index of women, youth and ethnic minorities
115	The degree of agreement that there equal pay between men and women for the same position
116	The percentage change in prices for primary product or service in the past year
117	The degree enterprises report they can raise prices 10% without losing a certain % of clients
118	The degree of agreement that most business relationships are with family or friends
119	The degree of perception that competition in sector is fair i.e. enterprises have same opportunities to grow
120	The degree of agreement by enterprises that disputes are resolved in effective manner
121	The degree of agreement that business relationships endure over the long-term
122	The degree of agreement there are sufficient mechanisms to resolve disputes
123	The degree of trust reported by enterprises in competing enterprises in the market
125	The percentage of enterprises that collaborated to defend interests of sector
131	Enterprise Collaboration Index
134	The degree of confidence by enterprises in local government
135	The degree of confidence by enterprises in national government
136	The degree of confidence by enterprises in police
137	The degree of confidence by enterprises in the judiciary
138	The degree of trust reported by enterprises in other competing enterprises in the market
140	The degree of confidence in suppliers or distributors
143	The degree that enterprises perceive the future volume of production is lower, the same or higher
144	The reported volume of purchases or orders in relation to the prior year
146	The degree that enterprises perceive the number of future employees is lower, the same or higher
148	The degree that enterprises perceive the future situation is bad, normal or good
149	The degree of perception of the situation of the enterprise's sector
153	Business Confidence Index

154	The degree of investment by enterprises in productive capacities
161	The percentage of enterprises that experienced insecurity as a shock or stressor
162	The percentage of enterprises that experienced climate or weather as a shock or stressor
163	The percentage of enterprises that experienced market or price volatility as a shock or stressor
169	The percentage of enterprises that experienced unfair competition as a shock or stressor
173	The number of types of shocks experienced by enterprises in the past year
174	The degree of severity of shocks experienced by enterprises
175	The degree of recovery by enterprises post-shock or stressor
185	The number of negative coping behaviors adopted by enterprises in the context of shock
186	The degree of confidence that enterprise can access alternative suppliers in a shock
187	The degree of confidence can access to alternative buyers and clients in a shock
188	The degree of confidence that enterprise can access financing in a shock
189	The degree of confidence can access support of partners in a shock
191	Business Resilience Capacities Index
192	The degree of contribution of external financing to business operations
193	The degree of contribution of workforce training services to business operations
194	The degree of contribution of business development services to business operations
199	The number of types of services accessed by the enterprise
200	The number of types of support services accessed that had significant contribution to business operations
201	The percentage of enterprises that reported paying taxes in the past year
230	The number of interactions with government institutions qualified as "good"
231	The number of interactions with government institutions qualified as "bad"
236	The perceived frequency that making undocumented payments or bribes to obtain judicial decisions occurs in area
237	The number of types of undocumented payments or bribes that enterprises report as common their area
239	The degree of perceived quality of electric power service in area
240	The degree of perceived quality of road infrastructure in area
241	The degree of perceived quality of transportation services in area
243	Perception Index of Quality of Infrastructure
245	The degree of perceived efficiency of administrative processes by enterprises
247	The percentage of enterprises which pay for security services
248	The percentage of enterprises that experienced losses associated with theft, extortion or fraud
253	The percentage of enterprises that report obtaining licenses and permits as an obstacle
256	The percentage of enterprises that report informal competition as an obstacle
257	The percentage of enterprises that report tax administration as an obstacle
258	The median number of obstacles in the enabling environment reported by enterprises
259	The degree of agreement the business enabling environment had improved in the past year
261	The percentage of enterprises that use international capital to finance their enterprise
262	The percentage of enterprises that use trade credit to finance their enterprise
263	The percentage of enterprises that use bank loans to finance their enterprise
264	The percentage of enterprises that use credit cards to finance their enterprise
276	Information and Communications Technology (ICT) index
295	The number of information sources used by the enterprise to support decision making
300	The degree of perceived quality of information used by enterprises from peers
305	The number of information sources used by the enterprise qualified as "good"
307	The percentage of enterprises with funds and financing to grow their business
308	The percentage of enterprises with sufficient market opportunities to grow their business
309	The percentage of enterprises with the capacity to assume the risk of failure to grow their business
310	The percentage of enterprises with skilled workers to grow their business
312	Entrepreneurship Capacities Index
314	The percentage of enterprises that adopted a new production technology
315	The percentage of enterprises that innovated products or services in the past year
316	The percentage of enterprises that adopted logistics innovations
317	The percentage of enterprises that adopted marketing or sales innovations
318	The percentage of enterprises that adopted business process innovations
319	The percentage of enterprises that adopted a new quality certification or standard
321	The number of type of innovations made by the enterprise in the past year
322	The degree of uncommness of innovations introduced by enterprises in the past year

ANNEX II. PAIRWISE INFLUENCES

Dynamic	#	Variable	Indicator	Influences	#	Variable	Indicator	Rating
1. Institutions and rule of law	4	Corruption	236	Decreases	1	Rule of law	134-37	3
1. Institutions and rule of law	2	Government administration (quality)	245 230	Increases	1	Rule of law	134-37	3
1. Institutions and rule of law	11	Public services and infrastructure	243	Increases	1	Rule of law	134-37	1
1. Institutions and rule of law	6	Democracy and governance	expert	Increases	1	Rule of law	expert	3
1. Institutions and rule of law	1	Rule of law	134 135	Increases	2	Government administration (quality)	245 230	3
1. Institutions and rule of law	1	Rule of law	137	Increases	3	Reforms to enabling environment	259	3
1. Institutions and rule of law	39	Discrimination	114	Decreases	2	Government administration (quality)	245 231	2
1. Institutions and rule of law	4	Corruption	237	Decreases	2	Government administration (quality)	230 231	3
1. Institutions and rule of law	3	Reforms to enabling environment	259	Increases	2	Government administration (quality)	245 231	2
1. Institutions and rule of law	15	Dispute resolution	122	Decreases	4	Corruption	237	1
1. Institutions and rule of law	1	Rule of law	expert	Decreases	4	Corruption	expert	3
1. Institutions and rule of law	31	Sector situation / competitiveness	149	Decreases	5	Crime and theft	161	2
1. Institutions and rule of law	1	Rule of law	134	Decreases	5	Crime and theft	161	2
1. Institutions and rule of law	34	Job creation and maintenance	59	Decreases	5	Crime and theft	248	3
1. Institutions and rule of law	35	Inclusive access to jobs	expert	Increases	6	Democracy and governance	expert	3
1. Institutions and rule of law	41	Education	expert	Increases	6	Democracy and governance	expert	3
2. Taxes and public expenditure	9	Tax burden	257	Increases	7	Informality	169 256	3
2. Taxes and public expenditure	30	Enterprise survival and growth	2	Decreases	7	Informality	201	3
2. Taxes and public expenditure	2	Government administration (quality)	258	Decreases	7	Informality	201	3
2. Taxes and public expenditure	30	Enterprise survival and growth	expert	Increases	8	Taxes	expert	3
2. Taxes and public expenditure	8	Taxes	expert	Increases	9	Tax burden	expert	3
2. Taxes and public expenditure	8	Taxes	expert	Increases	10	Government expenditure	expert	2
2. Taxes and public expenditure	10	Government expenditure	expert	Increases	11	Public services and infrastructure	expert	2
2. Taxes and public expenditure	4	Corruption	expert	Decreases	11	Public services and infrastructure	expert	3
2. Taxes and public expenditure	7	Informality	201	Increases	12	Informal sector competition	169	3
3. Competition and cooperation	12	Informal sector competition	169	Decreases	13	Fair competition in sector	119	3
3. Competition and cooperation	11	Public services and infrastructure	243	Increases	13	Fair competition in sector	119	2
3. Competition and cooperation	15	Dispute resolution	122	Increases	13	Fair competition in sector	119	3
3. Competition and cooperation	21	Entrepreneurship and innovation	315	Increases	14	Pricing power	117	3
3. Competition and cooperation	25	Recovery from shocks and stressors	175	Increases	14	Pricing power	117	3
3. Competition and cooperation	13	Fair competition in sector	119	Increases	14	Pricing power	117	3
3. Competition and cooperation	1	Rule of law	137	Increases	15	Dispute resolution	122	3

3. Competition and cooperation	15	Dispute resolution	120 122	Increases	16	Confidence in other enterprises	138/123	3
3. Competition and cooperation	17	Enterprise linkages / collaboration	121	Increases	16	Confidence in other enterprises	138/123	3
3. Competition and cooperation	16	Confidence in other enterprises	123 138	Increases	17	Enterprise linkages / collaboration	121 131	3
3. Competition and cooperation	23	Enterprise digitalization	276	Increases	17	Enterprise linkages / collaboration	131	3
3. Competition and cooperation	18	Market access	21	Increases	17	Enterprise linkages / collaboration	121	3
4. Connectivity to markets	31	Sector situation / competitiveness	149	Increases	18	Market access	308	3
4. Connectivity to markets	17	Enterprise linkages / collaboration	121	Increases	18	Market access	187	3
4. Connectivity to markets	21	Entrepreneurship and innovation	307 309	Increases	18	Market access	308	3
4. Connectivity to markets	22	Information use	295	Increases	18	Market access	308	3
4. Connectivity to markets	19	Access to finance	307	Increases	18	Market access	308	3
4. Connectivity to markets	20	Support services	200	Increases	18	Market access	187	2
4. Connectivity to markets	7	Informality	201	Decreases	19	Access to finance	192	3
4. Connectivity to markets	2	Government administration (quality)	230	Increases	19	Access to finance	192	2
4. Connectivity to markets	18	Market access	21	Increases	19	Access to finance	192	2
4. Connectivity to markets	20	Support services	194	Increases	19	Access to finance	192	2
4. Connectivity to markets	2	Government administration (quality)	230	Increases	20	Support services	200	2
4. Connectivity to markets	22	Information use	305	Increases	20	Support services	200	2
4. Connectivity to markets	21	Entrepreneurship and innovation	322 312	Increases	20	Support services	200	2
4. Connectivity to markets	31	Sector situation / competitiveness	149	Increases	20	Support services	200	3
5. Business strategies	23	Enterprise digitalization	276	Increases	21	Entrepreneurship and innovation	312	3
5. Business strategies	13	Fair competition in sector	119	Increases	21	Entrepreneurship and innovation	312	3
5. Business strategies	2	Government administration (quality)	230	Increases	21	Entrepreneurship and innovation	312	2
5. Business strategies	22	Information use	295	Increases	21	Entrepreneurship and innovation	312	2
5. Business strategies	40	Workforce skills	97	Increases	21	Entrepreneurship and innovation	321 322	3
5. Business strategies	20	Support services	200	Increases	21	Entrepreneurship and innovation	312	3
5. Business strategies	23	Enterprise digitalization	276	Increases	22	Information use	295	3
5. Business strategies	17	Enterprise linkages / collaboration	expert	Increases	22	Information use	expert	3
5. Business strategies	17	Enterprise linkages / collaboration	131	Increases	23	Enterprise digitalization	276	2
5. Business strategies	21	Entrepreneurship and innovation	312	Increases	23	Enterprise digitalization	276	3
6. Risk and resilience	5	Crime and theft	248	Increases	24	Severity shocks and stressors	173 174	3
6. Risk and resilience	2	Government administration (quality)	231	Decreases	24	Severity shocks and stressors	173 174	2
6. Risk and resilience	12	Informal sector competition	256	Increases	24	Severity shocks and stressors	173 174	2
6. Risk and resilience	11	Public services and infrastructure	239	Decreases	24	Severity shocks and stressors	173 174	2
6. Risk and resilience	28	Climate change and weather volatility	expert	Increases	24	Severity shocks and stressors	expert	2
6. Risk and resilience	29	Market price volatility	expert	Increases	24	Severity shocks and stressors	expert	2
6. Risk and resilience	27	Business resilience capacities	expert	Increases	25	Recovery from shocks and stressors	expert	3
6. Risk and resilience	24	Severity shocks and stressors	174	Decreases	25	Recovery from shocks and stressors	175	3

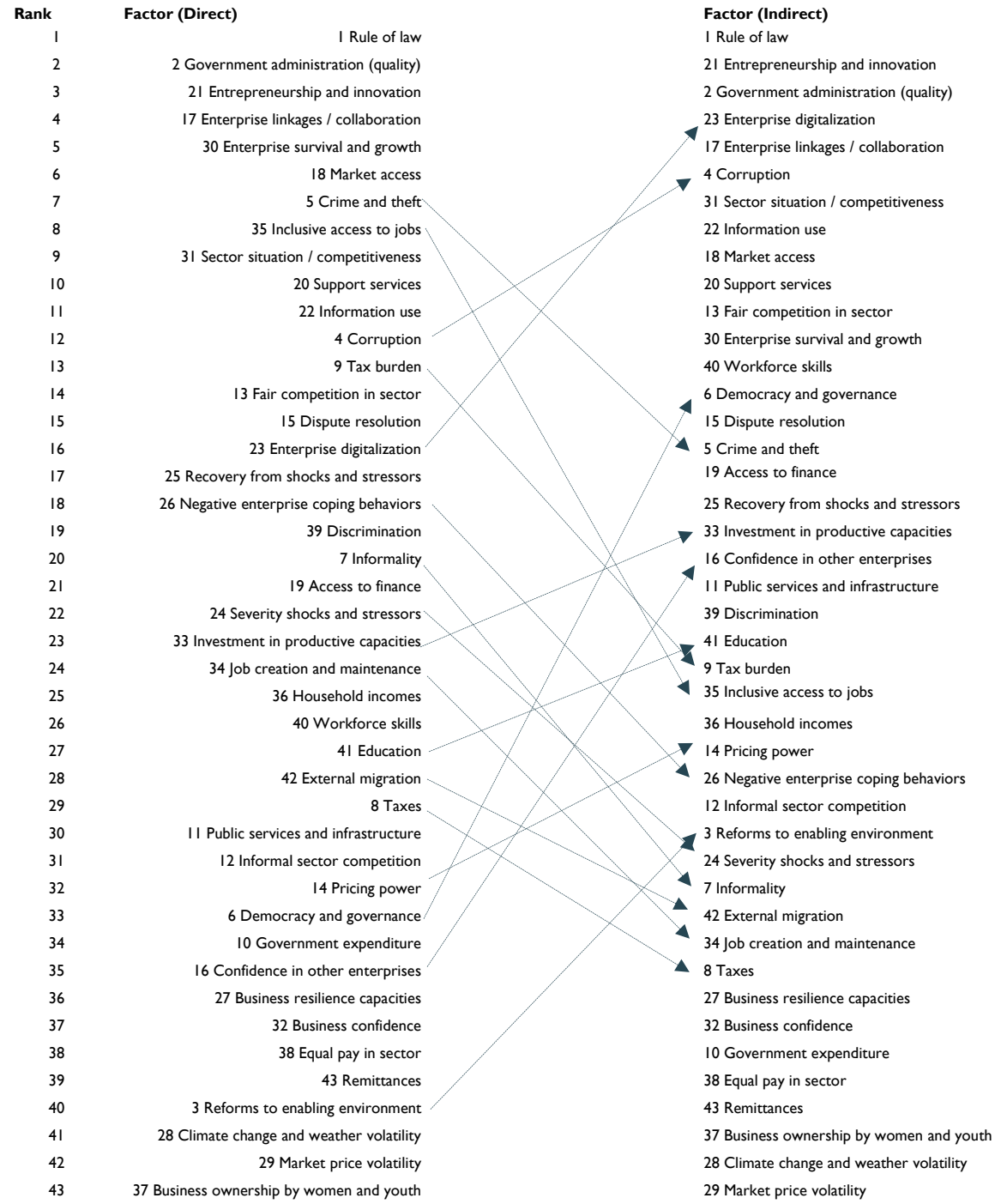
6. Risk and resilience	24	Severity shocks and stressors	172 174	Increases	26	Negative enterprise coping behaviors	185	3
6. Risk and resilience	15	Dispute resolution	120	Increases	27	Business resilience capacities	191	3
6. Risk and resilience	17	Enterprise linkages / collaboration	121	Increases	27	Business resilience capacities	191	3
6. Risk and resilience	22	Information use	305	Increases	27	Business resilience capacities	191	3
6. Risk and resilience	21	Entrepreneurship and innovation	321	Increases	27	Business resilience capacities	191	3
6. Risk and resilience	18	Market access	144	Increases	27	Business resilience capacities	191	3
6. Risk and resilience	20	Support services	200	Increases	27	Business resilience capacities	191	3
7. Growth and investment	21	Entrepreneurship and innovation	314	Increases	30	Enterprise survival and growth	15	3
7. Growth and investment	33	Investment in productive capacities	154	Increases	30	Enterprise survival and growth	15	3
7. Growth and investment	18	Market access	144	Increases	30	Enterprise survival and growth	15	3
7. Growth and investment	26	Negative enterprise coping behaviors	185	Decreases	30	Enterprise survival and growth	15	3
7. Growth and investment	25	Recovery from shocks and stressors	175	Increases	30	Enterprise survival and growth	15	3
7. Growth and investment	31	Sector situation / competitiveness	149	Increases	30	Enterprise survival and growth	15	3
7. Growth and investment	14	Pricing power	314	Increases	30	Enterprise survival and growth	15	3
7. Growth and investment	36	Household incomes	expert	Increases	30	Enterprise survival and growth	expert	3
7. Growth and investment	30	Enterprise survival and growth	15	Increases	31	Sector situation / competitiveness	149	3
7. Growth and investment	30	Enterprise survival and growth	15	Increases	32	Business confidence	153	3
7. Growth and investment	2	Government administration (quality)	258	Increases	32	Business confidence	153	3
7. Growth and investment	18	Market access	144 187	Increases	32	Business confidence	153	3
7. Growth and investment	26	Negative enterprise coping behaviors	185	Decreases	32	Business confidence	153	2
7. Growth and investment	32	Business confidence	153	Increases	33	Investment in productive capacities	154	3
7. Growth and investment	25	Recovery from shocks and stressors	175	Increases	33	Investment in productive capacities	154	2
7. Growth and investment	17	Enterprise linkages / collaboration	121 140	Increases	33	Investment in productive capacities	154	2
7. Growth and investment	19	Access to finance	expert	Increases	33	Investment in productive capacities	expert	3
7. Growth and investment	9	Tax burden	expert	Decreases	33	Investment in productive capacities	expert	3
8. Inclusive economic opportunities	30	Enterprise survival and growth	15	Increases	34	Job creation and maintenance	40 59	3
8. Inclusive economic opportunities	26	Negative enterprise coping behaviors	185	Decreases	34	Job creation and maintenance	40 59	3
8. Inclusive economic opportunities	40	Workforce skills	expert	Increases	35	Inclusive access to jobs	expert	3
8. Inclusive economic opportunities	37	Business ownership by women and youth	9 13	Increases	35	Inclusive access to jobs	63 31	2
8. Inclusive economic opportunities	35	Inclusive access to jobs	expert	Increases	36	Household incomes	expert	3
8. Inclusive economic opportunities	43	Remittances	expert	Increases	36	Household incomes	expert	3
8. Inclusive economic opportunities	9	Tax burden	expert	Decreases	36	Household incomes	expert	3
8. Inclusive economic opportunities	35	Inclusive access to jobs	63 64	Increases	37	Business ownership by women and youth	9 11	3
8. Inclusive economic opportunities	39	Discrimination	111	Decreases	37	Business ownership by women and youth	9 11	3
8. Inclusive economic opportunities	35	Inclusive access to jobs	added	Increases	38	Equal pay in sector	added	3
8. Inclusive economic opportunities	39	Discrimination	114	Decreases	38	Equal pay in sector	115	3
8. Inclusive economic opportunities	38	Equal pay in sector	115	Decreases	39	Discrimination	114	3

8. Inclusive economic opportunities	13	Fair competition in sector	119	Decreases	39	Discrimination	114	3
8. Inclusive economic opportunities	1	Rule of law	137	Decreases	39	Discrimination	114 115 108	3
8. Inclusive economic opportunities	5	Crime and theft	247	Increases	39	Discrimination	108 114	3
9. Workforce and labor markets	41	Education	90	Increases	40	Workforce skills	97	3
9. Workforce and labor markets	42	External migration	107	Decreases	40	Workforce skills	97	3
9. Workforce and labor markets	33	Investment in productive capacities	99	Increases	40	Workforce skills	97	3
9. Workforce and labor markets	36	Household incomes	expert	Increases	41	Education	expert	3
9. Workforce and labor markets	5	Crime and theft	expert	Decreases	41	Education	expert	3
9. Workforce and labor markets	10	Government expenditure	expert	Increases	41	Education	expert	1
9. Workforce and labor markets	34	Job creation and maintenance	59	Decreases	42	External migration	106	3
9. Workforce and labor markets	5	Crime and theft	expert	Increases	42	External migration	expert	3
9. Workforce and labor markets	42	External migration	expert	Increases	43	Remittances	expert	3

ANNEX III. STRUCTURAL ANALYSIS

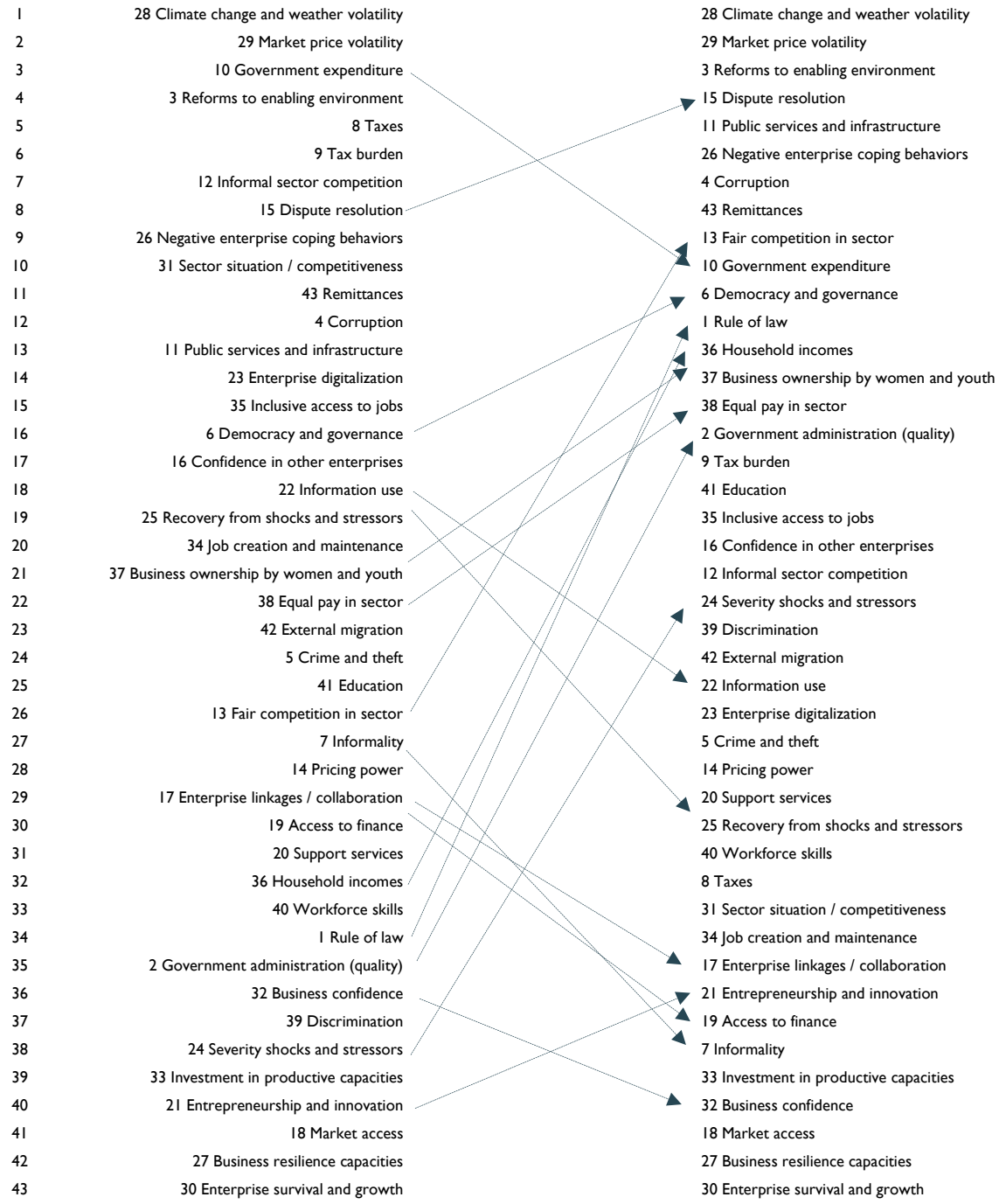
The ranking of variables based on their degree of influence (from high to low) is presented below. Re-ranking shifts (direct versus indirect) are similarly shown in the chart. The indirect influence is used for the final rankings. Arrows have been drawn to denote where a variable change in its ranking by more than 3 ranks.

FIGURE 170. RANKING OF FACTORS BASED ON CALCULATED INLFUENCE (DIRECT AND INDIRECT)



The ranking of variables based on their degree of dependence (from low to high) is presented below. Re-ranking shifts (direct versus indirect) are similarly shown in the chart. The indirect dependence is used for the final rankings. Arrows have been drawn to denote where a variable change in its ranking by more than 3 ranks.

FIGURE 171. RANKING OF FACTORS BASED ON CALCULATED DEPENDENCE (DIRECT AND INDIRECT)

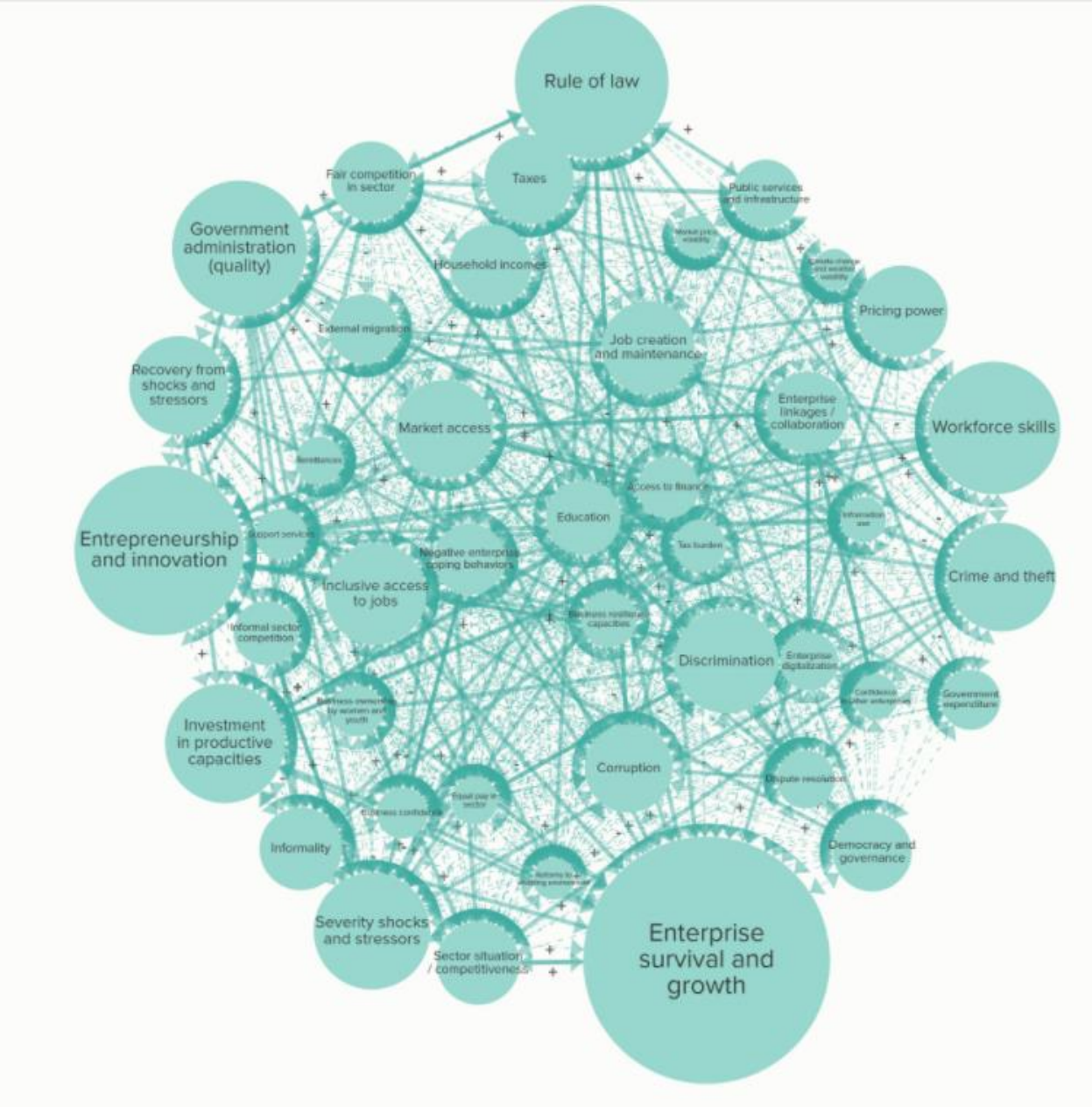


A causal loop diagram (CLD) of the direct interactions is provided in the graphic below. In this diagram the polarity of the relationships is identified as whether one variable's influence increases (+) or decreases (-) the other dependent variable. The lay-out of the CLD is force-directed meaning the more "central" elements are pulled to the center and similar groups of elements tend to be clustered together in the CLD.

FIGURE 172. CAUSAL LOOP DIAGRAM (CLD) OF DIRECT PAIRWISE INFLUENCES

The diagram below adds two aspects to the prior CLD displayed in the diagram. The first aspect is the inclusion of indirect influences between variables. The second aspect is to size the variables based on the network metric "betweenness centrality" which measures the degree to which a node or factor in the system is the shortest path or a "bridge" to other variables in the system. This additional view highlights enterprise survival and growth as a hotspot in the system reinforcing the importance to protect this outcome as that drives others. Similar critical nodes are entrepreneurship and innovation, rule of law, government administration and workforce skills.

FIGURE 173. CAUSAL LOOP DIAGRAM (CLD) OF DIRECT AND INDIRECT PAIRWISE INFLUENCES



ANNEX IV. REGRESSION ANALYSIS

#1 RULE OF LAW

INDICATOR # 134 – THE DEGREE OF CONFIDENCE REPORTED BY ENTERPRISES IN LOCAL GOVERNMENT

This indicator measures the level of confidence enterprises have in local government (Ind134), with the incremental levels being: none, little, much. Using the variable selection regression process (Lasso logit), four variables were identified that were predictive of the dependent variable "confidence in local government." The selected variables were statistically significant and predictively explained 7.8% (Pseudo R-squared) of the behavior of the perception of confidence in the local government in Honduras. The effects tend to be incremental for variables: good government interactions $[z_{432} = 2.990, p = 0.003]$, government administration efficiency $[z_{432} = 4.710, p = 0.000]$ and, infrastructure and public services $[z_{432} = 3.220, p = 0.001]$, an inverse effect is seen for variable additional payments for adjudication $[z_{432} = -2.570, p = 0.010]$,

- Honduran firms that have experienced good interactions with government (Ind230) tend to be 1.2 times more likely to report to have much confidence in the local government.
- Honduran firms that considered government administration highly efficient (Ind245) tend to be 1.7 times more likely to have much confidence in local government,
- Honduran firms that qualified the infrastructure and public services the best (Ind243) tend to be 1.2 times more likely to have much confidence in the local government.
- Honduran enterprises that reported having made additional payments to get contracts or public licenses (Ind236) tend to be 69% less likely to report to have much confidence in the local government.

FIGURE 174. ORDERED LOGISTIC REGRESSION FOR CONFIDENCE IN LOCAL GOVERNMENT

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Confidence in local government (Ind134) Pseudo R2 = 0.0779 Responses 432	Good government interactions (Ind230)	1.188***	1.061	1.330	0.068
	Government administration efficiency (Ind245)	1.676***	1.352	2.078	0.184
	Infrastructure and public services (Ind243)	1.166***	1.062	1.281	0.056
	Additional payments for adjudication (Ind236)	0.694***	0.525	0.917	0.099
	/cut1	1.845	1.240	2.450	0.309
	/cut2	4.127	3.411	4.843	0.365

*, **, *** Significance at 90%, 95% and 99% level, respectively.

INDICATOR # 135 – THE DEGREE OF CONFIDENCE REPORTED BY ENTERPRISES IN NATIONAL GOVERNMENT

This indicator measures the level of confidence enterprises reported have in the national government (Ind135), the incremental levels being: none, little, much. Using the variable selection regression process (Lasso logit), five variables were identified that were predictive of the dependent variable "confidence in national government." The selected variables were statistically significant and predictively explained 9.98% (Pseudo R-squared) of the behavior of the perception of confidence in the national government in Honduras. The effects tend to be incremental for variables: good government interactions $[z_{409} = 3.100, p = 0.002]$, government administration efficiency $[z_{409} = 4.460, p = 0.000]$, infrastructure and public services $[z_{409} = 2.190, p = 0.029]$ and Administrative and legal services $[z_{409} = 3.380, p = 0.001]$, an inverse effect is seen for variable additional payments for adjudication $[z_{432} = -2.230, p = 0.026]$,

- Honduran firms that have experienced good government interactions (Ind230) tend to be 1.2 times more likely to report to have much confidence in the national government.
- Honduran firms that considered government administration highly efficient (Ind245) tend to be 1.7 times more likely to have much confidence in national government,
- Honduran firms that qualified the infrastructure and public services the best (Ind243) tend to be 1.1 times more likely to have much confidence in the national government.
- Honduras enterprises that reported having used administrative and legal services (Ind195) tend to be 1.5 times more likely to report to have much confidence in the national government.
- Honduran firms that reported having made additional payments to get contracts or public licenses (Ind236) tend to be 67% less likely to report to have much confidence in the local government.

FIGURE 175. ORDERED LOGISTIC REGRESSION FOR CONFIDENCE IN NATIONAL GOVERNMENT

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	**High**	
Confidence in national government (Ind135) Pseudo R2 = 0.0998 Responses 409	Good government interactions (Ind230)	1.209***	1.072	1.363	0.074
	Government administration efficiency (Ind245)	1.741***	1.365	2.222	0.217
	Infrastructure and public services (Ind243)	1.126**	1.012	1.253	0.061
	Additional payments for adjudication (Ind236)	0.674**	0.476	0.954	0.119
	Administrative and legal services (Ind195)	1.474***	1.178	1.846	0.169
	/cut1	3.110	2.309	3.911	0.409
	/cut2	5.035	4.122	5.947	0.466

*, **, *** Significance at 90%, 95% and 99% level, respectively.

INDICATOR # 136 – THE DEGREE OF CONFIDENCE REPORTED BY ENTERPRISES IN POLICE OFFICIALS

This indicator measures the level of confidence reported by Honduran firms in police officials (Ind136), the incremental levels being: none, little and much. Using the variable selection regression process (Lasso logit), four variables were identified that were predictive of the dependent variable "confidence in police officials." The selected variables were statistically significant and predictively explained 6.1% (Pseudo R-squared) of the behavior of the perception of confidence in police officials in Honduras. The effects tend to be incremental for variables: good government interactions $[z_{435} = 4.390, p = 0.000]$, government administration efficiency $[z_{435} = 2.790, p = 0.005]$, infrastructure and public services $[z_{435} = 1.980, p = 0.048$, an inverse effect is seen for variable additional payments for adjudication $[z_{435} = -2.520, p = 0.012]$,

- Honduran firms that have experienced good government interactions (Ind230) tend to be 1.3 times more likely to report they have much confidence in the police officials.
- Honduran firms that considered government administration highly efficient (Ind245) tend to be 1.3 times more likely to have much confidence in police officials.
- Honduran firms that qualified the infrastructure and public services the best (Ind243) tend to be 1.1 times more likely to have much confidence in the police officials.
- Honduran firms that reported having made additional payments to get contracts or public licenses (Ind236) tend to be 71% less likely to report to report they have much confidence in the police officials.

FIGURE 176. ORDERED LOGISTIC REGRESSION FOR CONFIDENCE IN POLICE OFFICIALS

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	**High**	
Confidence in police officials (Ind136) Pseudo R2 = 0.0611 Responses 435	Good government interactions (Ind230)	1.298***	1.155	1.458	0.077
	Government administration efficiency (Ind245)	1.347***	1.093	1.660	0.144
	Infrastructure and public services (Ind243)	1.099**	1.001	1.207	0.052
	Additional payments for adjudication (Ind236)	0.707**	0.540	0.926	0.097
	/cut1	1.172	0.590	1.754	0.297
	/cut2	3.837	3.128	4.546	0.362

*, **, *** Significance at 90%, 95% and 99% level, respectively.

INDICATOR # 137 – THE DEGREE OF CONFIDENCE REPORTED BY ENTERPRISES IN THE JUDICIAL SYSTEM

This indicator measures the level of confidence reported by Honduran firms in the judicial system (Ind137), the incremental levels being: none, little and much. Using the variable selection regression process (Lasso logit), three variables were identified that were predictive of the dependent variable "confidence in judicial system." The selected variables were statistically significant and predictively explained 5.1% (Pseudo R-squared) of the behavior of the perception of confidence in judicial system in Honduras. The effects tend to be incremental for the three variables, good government interactions $[z_{592} = 4.020, p = 0.000]$, government administration efficiency $[z_{592} = 3.020, p = 0.003]$ and, infrastructure and public services $[z_{592} = 3.950, p = 0.000]$.

- Honduran firms that have experienced good government interactions (Ind230) tend to be 1.2 times more likely to report they have much confidence in the judicial system.
- Honduran firms that considered government administration highly efficient (Ind245) tend to be 1.3 times more likely to have much confidence in judicial system.
- Honduran firms that qualified the infrastructure and public services the best (Ind243) tend to be 1.2 times more likely to have much confidence in judicial system.

FIGURE 177. ORDERED LOGISTIC REGRESSION FOR CONFIDENCE IN POLICE OFFICIALS

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	**High**	
Confidence in judicial system (Ind137) Pseudo R2 = 0.0508 Responses 592	Good government interactions (Ind230)	1.240***	1.116	1.376	0.066
	Government administration efficiency (Ind245)	1.338***	1.108	1.616	0.129
	Infrastructure and public services (Ind243)	1.175***	1.085	1.273	0.048
	/cut1	1.827	1.296	2.359	0.271
	/cut2	4.176	3.536	4.815	0.326

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#2 GOVERNMENT ADMINISTRATION (QUALITY)

INDICATOR # 230 – THE NUMBER OF GOVERNMENT INTERACTIONS BY ENTERPRISES QUALIFIED AS "GOOD"

This count indicator measures the number of interactions qualified by Honduran firms with government institutions as good (Ind230). Using the variable selection regression process (Lasso poisson), four variables were identified that were predictive of the dependent variable "good government interactions" in a first regression. Power pricing (Ind119) and public information (Ind287) were omitted because these variables were considered are not related directly. This resulted in a model with two variables that were statistically significant and predictively explained 3.3% (Pseudo R-squared) of the behavior of the perception of good interactions with government institutions. The effects tend to be incremental for the two variables, confidence in local government $[z_{678} = 2.770, p = 0.00]$ and confidence in national government $[z_{678} = 4.080, p = 0.000]$.

- Honduran firms that have reported a high confidence in the local government (Ind134) tend to be 1.2 times more likely to qualify interactions with government institutions as good.
- Honduran firms that have reported a high confidence in the national government (Ind135) tend to be 1.3 times more likely to qualify interactions with government institutions as good.

FIGURE 178. POISSON REGRESSION FOR GOOD GOVERNMENT INTERACTIONS

Dependent variable	**Independent Variable**	**Incidence Rate Ratio**	**Interval (95% confidence interval)**		**Error Std.**
			Under	**High**	
Good government interactions (Ind230) Pseudo R2 = 0.0327 Responses 678	Confidence in local government (Ind134)	1.205***	1.056	1.376	0.081
	Confidence in national government (Ind135)	1.307***	1.149	1.486	0.086
	_cons	0.843	0.758	0.938	0.046

*, **, *** Significance at 90%, 95% and 99% level, respectively.

INDICATOR # 231 – THE NUMBER OF GOVERNMENT INTERACTIONS BY ENTERPRISES QUALIFIED AS "BAD"

This count indicator is measures the number of interactions qualified by Honduran firms with government institutions as bad (Ind231). Using the variable selection regression process (Lasso poisson), three variables were identified that were predictive of the dependent variable "bad government interactions". The selected variables were statistically significant and predictively explained 6.1% (Pseudo R-squared) of the behavior of the perception of bad interactions with government institutions. The effects tend to be incremental for discrimination index $[z_{678} = 2.080, p = 0.037]$, while an inverse effect is seen for business enabling environment improved $[z_{426} = -7.350, p = 0.000]$ and confidence in local government $[z_{426} = -1.800, p = 0.072]$.

- For one unit of increase in the discrimination index in the sector (Ind114), firms are expected to increase by a factor of 1.1 their qualification of bad government interactions.
- Honduran firms that expect a better performance of the business enabling environment in 2021 (Ind259) tend to be by a factor of 0.72 less likely to qualify interactions with government institutions as bad.
- Honduran firms that have reported much confidence in local government (Ind134) tend to be by a factor of 0.85 less likely to qualify interactions with government institutions as bad.

FIGURE 179. POISSON REGRESSION FOR BAD GOVERNMENT INTERACTIONS

Dependent variable	Independent Variable	Incidence Rate Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Bad government interactions (Ind231)	Business enabling environment improved (Ind259)	0.720***	0.660	0.786	0.032
	Discrimination index (Ind114)	1.066**	1.004	1.133	0.033
Pseudo R2 = 0.0608	Confidence in local government (Ind134)	0.846*	0.705	1.015	0.079
Responses 426	Constant	1.896	1.377	2.610	0.309

*, **, *** Significance at 90%, 95% and 99% level, respectively.

INDICATOR #245 – THE DEGREE OF AGREEMENT IN THE EFFICIENCY OF GOVERNMENT ADMINISTRATION

This indicator measures the agreement of Honduran firms on the efficiency government administration (Ind245) by procedures, permits and municipal regulations. The incremental levels being: very low, low, average, high and very high. Using the variable selection regression process (Lasso logit), five variables were identified that were predictive of the dependent variable "Government administration efficiency" in a first regression. Politics as a shock (Ind164) is a proxy of government administration efficiency and rule of law (Ind122) was not statistically significant, then these variables were omitted, resulting a model of three predictive variables. The selected variables were statistically significant and predictively explained 5.5% (Pseudo R-squared) of the behavior of the perception of the efficiency of the government administration. The effects tend to be incremental for confidence in local government $[z_{399} = 4.770, p = 0.000]$ and business enabling environment improved $[z_{399} = 4.420, p = 0.000]$, while an inverse effect is seen for discrimination index $[z_{399} = -2.860, p = 0.04]$.

- Honduran firms that have reported a high confidence in the local government (Ind134) tend to be 2 times more likely to consider the government administration very efficient.
- Honduran firms that expect a better performance of business enabling environment in 2021 (Ind259) tend to be 1.4 times more likely to consider the government administration very efficient.
- For one unit of increase in the discrimination index in the sector (Ind114) would be expected that Honduras firms be 86% less likely to consider the government administration highly efficient.

FIGURE 180. ORDERED LOGISTIC REGRESSION FOR GOVERNMENT ADMINISTRATION EFFICIENCY

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Government administration efficiency (Ind245)	Confidence in local government (Ind134)	1.972***	1.492	2.607	0.281
	Business enabling environment improved (Ind259)	1.419***	1.215	1.657	0.112
Pseudo R2 = 0.0547	Discrimination index (Ind114)	0.860***	0.776	0.954	0.045
Responses 399	/cut1	-0.076	-0.679	0.527	0.308
	/cut2	1.224	0.612	1.837	0.313
	/cut3	3.958	3.227	4.690	0.373
	/cut4	5.926	4.880	6.973	0.534

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#3 REFORMS TO ENABLING ENVIRONMENT

INDICATOR # 259 – THE DEGREE OF AGREEMENT THAT THE BUSINESS ENABLING ENVIRONMENT IMPROVED

This indicator measures the agreement of Honduran firms that business enabling environment had improved in the prior year to COVID-19 (Ind259). The incremental levels being: seriously worse, worse, did not change, improved slightly and greatly improved. Using the variable selection regression process (Lasso logit), three variables were identified that were predictive of the dependent variable "Business enabling environment improved" in a first regression. Government administration efficiency (Ind245) and losses from crime and theft (Ind248) were considered correlated and not causal factor for the dependent variable, then these variables were omitted, resulting a model of one predictive variable. The selected variable was statistically significant and predictively explained 0.9% (Pseudo R-squared) of the behavior of the perception of the efficiency of the improve expected of the business enabling environment in 2021. The effects tend to be incremental for confidence in judicial system $[z_{624} = 4.000, p = 0.000]$. Honduran firms that have reported a high confidence in the judicial system (Ind137) tend to be 1.6 times more likely to consider the business enabling environment will greatly improve in 2021.

FIGURE 181. ORDERED LOGISTIC REGRESSION FOR BUSINESS ENABLING ENVIRONMENT IMPROVED

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Business enabling environment improved (Ind259)	Confidence in judicial system (Ind137)	1.599***	1.271	2.012	0.187
	/cut1	-2.131	-2.424	-1.838	0.149
	/cut2	-1.188	-1.410	-0.966	0.113
Pseudo R2 = 0.0093	/cut3	-0.531	-0.732	-0.331	0.102
Responses 624	/cut4	1.583	1.345	1.820	0.121

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#4 CORRUPTION

INDICATOR #237 – THE REPORTED FREQUENCY UNDOCUMENTED PAYMENTS AND/OR BRIBES TO PUBLIC OFFICIALS

There are three indicator that measure the degree of frequency that Honduran firms consider it frequent that enterprises make undocumented payments and/or bribes to public officials in their area.

First relates to undocumented payments for public services (Ind234). Using the variable selection regression process (Lasso logit), only one variable was identified that was predictive of the dependent variable "Undocumented payments for public services". The selected variable was statistically significant and predictively explained 1.1% (Pseudo R-squared) of the behavior of the perception of the additional payments made by firms for the public services. The effects tend to be inverse for institutions / rule of law $[z_{423} = -2.190, p = 0.028]$. For those firms that have reported a strong confidence that there are effective options for conflict resolution (Ind122), is expected that the odds for making additional payments related to public services decreased by 80.2%.

FIGURE 182. ORDERED LOGISTIC REGRESSION FOR ADDITIONAL PAYMENT FOR PUBLIC SERVICES

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Undocumented payments for public services (Ind235)	Institutions / rule of law (Ind122)	0.802**	0.658	0.977	0.081
Pseudo R2 = 0.0110	Constant	0.520**	0.278	0.975	0.167
Responses 423					

*, **, *** Significance at 90%, 95% and 99% level, respectively.

Second relates to undocumented payments for taxes (Ind235). Using the variable selection regression process (Lasso logit), only one variable was identified that was predictive of the dependent variable "Undocumented payments for taxes". The selected variable was statistically significant and predictively explained 1.3% (Pseudo R-squared) of the behavior of additional payments made by firms for paying taxes. The effects tend to be inverse for institutions / rule of law $[z_{412} = -2.260, p = 0.024]$. For those firms that have reported a strong confidence that there are effective options for conflict resolution (Ind122), is expected that the odds for making additional payments related to paying taxes decreased by 78.9%.

FIGURE 183. ORDERED LOGISTIC REGRESSION FOR ADDITIONAL PAYMENT FOR PAYING TAXES

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Undocumented payments for paying taxes (Ind235)	Institutions / rule of law (Ind122)	0.789**	0.642	0.969	0.083
Pseudo R2 = 0.0126	Constant	0.492**	0.257	0.938	0.162
Responses 412					

*, **, *** Significance at 90%, 95% and 99% level, respectively.

Finally, the undocumented payments for adjudication (Ind234) that measures the frequency that Honduran firms perceive that making undocumented payments related to adjudicate a contract or getting public licenses is frequent. Using the variable selection regression process (Lasso logit), only one variable was identified that was predictive of the dependent variable "Undocumented payments for taxes". The selected variable was statistically significant and predictively explained 0.83% (Pseudo R-squared) of the

behavior of the perception of the additional payments made for adjudications. The effects tend to be inverse for institutions / rule of law $[z_{402} = -1.750, p = 0.079]$. For those firms that have reported a strong confidence that there are effective options for conflict resolution (Ind122), is expected that the odds for making undocumented payments related to adjudications decrease by 82.3%.

FIGURE 184. ORDERED LOGISTIC REGRESSION FOR ADDITIONAL PAYMENT FOR ADJUDICATION

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Undocumented payments for adjudication (Ind236) Pseudo R2 = 0.0083 Responses 402	Institutions / rule of law (Ind122)	0.823*	0.661	1.023	0.092
	Constant	0.380***	0.191	0.759	0.134

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#5 CRIME AND THEFT

INDICATOR # 161 – THE PERCENTAGE OF ENTERPRISES AFFECTED BY CRIME OR THEFT

This indicator is measured on a binary scale of zero and one, where zero represents that Honduran enterprises was not affected by crime and theft and one represents that they have suffered insecurity. Using the variable selection regression process (Lasso logit), two variables were identified that were predictive of the dependent variable "crime or delinquency." The selected variables were statistically significant and predictively explained 5.4% (Pseudo R-squared) of the behavior of the perception of the shock of insecurity in companies in Honduras. The effect tends to be smaller and indirect with the two variables used: sector situation and institutions/rule of law. $[z_{679} = -5.450, p = 0.000]$ and Institutions / Rule of Law $[z_{679} = -3.850, p = 0.000]$.

- Honduran firms that considered the situation of the sector (ind149) in which they are involved to be favorable tend to be 0.55 times less likely to report being affected by crime or theft.
- Honduran enterprises that reported having confidence in institutions and rule of law (ind137) in the country have a probability of less than 0.64 times of considering that they will be affected by insecurity.

FIGURE 185. LOGISTIC REGRESSION FOR CRIME OR THEFT (AS A SHOCK)

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Crime or theft (Ind161) Pseudo R-squared = 0.0539 Responses 679	Sector situation / competitiveness (Ind149)	0.551***	0.445	0.682	0.060
	Institutions / Rule of Law (Ind134)	0.637***	0.506	0.801	0.075
	Constant	1.697	1.368	2.105	0.187

*, **, *** Significance at 90%, 95% and 99% level, respectively.

INDICATOR # 248 – THE PERCENTAGE OF ENTERPRISES EXPERIENCED LOSSES FROM CRIME OR THEFT

This indicator is measured in a scale from zero to one, where one indicates the Honduran firms that experienced losses from crime and theft (Ind248). Using the variable selection regression process (Lasso logit), four variables were identified that were predictive of the dependent variable "losses from crime or theft.", this model was reduced to var179 (lay-offing staff) as the other factors were similarly correlated coping behaviors result in loss of staff which is the logistical link between employment and crime.. The selected variable was statistically significant and predictively explained 2.6% (Pseudo R-squared) of the behavior of the losses from crime or delinquency in Honduras. The effect tends to be direct for the variable laying-off staff $[z_{667} = 3.730, p = 0.000]$. Honduran firms that have fired staff as coping behavior (Ind179) are 2.3 times more likely to report that they experienced losses from crime or delinquency.

FIGURE 186. LOGISTIC REGRESSION FOR LOSSES FROM CRIME OR THEFT

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
		2.311***	1.489	3.588	0.519

Losses from crime or theft (Ind248)	Fire staff as coping behavior (Ind179)				
Pseudo R-squared = 0.0257 Responses 667	Constant	0.114***	0.082	0.156	0.018

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#6 DEMOCRACY AND GOVERNANCE

This variable was not directly measured by enterprise-level data in the 2020 Diagnostic. This variable was added by experts to explain the variable rule of law and as part of understanding of the dynamic of institutions and rule of law.

#7 INFORMALITY

INDICATOR # 201 – THE PERCENTAGE OF ENTERPRISES THAT REPORTED PAYING TAXES (SAR)

The indicator is measured in a scale from zero to one, where one indicates the Honduran firms reported paying taxes (Ind201). Using the variable selection regression process (Lasso logit), four variables were identified that were predictive of the dependent variable "Paying taxes." As the variables business confidence index (Ind142) includes too many factors as an index for ready interpretation and credit card debt (Ind262) is correlated with informality, then these variables were dropped from the model; resulting a model with two predictive variables. The selected variables were statistically significant and predictively explained 7.4% (Pseudo R-squared) of the behavior of paying taxes by firms in Honduras. The effect tends to be incremental for obstacle index $[z_{630} = 3.900, p = 0.000]$ and inverse for startups $[z_{630} = -5.510, p = 0.000]$.

- Honduran firms that are identified as a startup (Ind2) tend to be 27% less likely to report paying taxes.
- For one unit increased in the obstacle index (Ind258) the Honduran firms are 1.8 more likely to report paying taxes.

FIGURE 187. LOGISTIC REGRESSION FOR PAYING TAXES

Dependent variable	Independent Variable	Odds Ratios	Interval (95% confidence interval)		Error Std.
			Under	High	
Paying taxes (Ind201)	Startups (Ind2)	0.268***	0.168	0.428	0.064
Pseudo R-squared = 0.0735 Responses 630	Obstacle index (Ind258)	1.803***	1.340	2.424	0.272
	Constant	3.283***	2.379	4.530	0.539

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#8 TAXES

This variable was not directly measured by enterprise-level data in the 2020 Diagnostic. This variable was added in expert analysis to explain the tax burden variable.

#9 TAX BURDEN

INDICATOR # 257 – THE PERCENTAGE OF ENTERPRISES THAT IDENTIFIED THE TAX BURDEN AS AN OBSTACLE

This variable was not directly measured by enterprise-level data in the 2020 Diagnostic. The variable taxes was added in expert analysis to explain the tax burden.

#10 GOVERNMENT EXPENDITURE

This variable was not directly measured by enterprise-level data in the 2020 Diagnostic. This variable was added in expert analysis to explain the taxes and public services and infrastructure variables.

#11 PUBLIC SERVICES AND INFRASTRUCTURE

INDICATOR # 243 – INFRASTRUCTURE QUALITY PERCEPTIONS INDEX

No statistical model was identified that was predictive of perceptions of quality of public services and infrastructure. However, expert analysis determined government expenditure (not measured) and corruption had significant influence on this variable.

#12 INFORMAL SECTOR COMPETITION

INDICATOR # 169 – THE PERCENTAGE OF ENTERPRISES WERE AFFECTED BY INFORMAL COMPETITION

No statistical model was identified for this specific indicator #169 a binary measure for whether enterprises were affected by informal competition. However, indicator #256 as an ordinal variable measured the same factor and is used in analysis.

INDICATOR # 256 – THE DEGREE THAT ENTERPRISES CONSIDER COMPETITION FROM THE INFORMAL SECTOR AS AN OBSTACLE

The indicator measures the degree to which Honduran firms consider the competition with informal enterprises an obstacle (Ind256), the incremental levels being: there is not obstacle, minor obstacle and severe obstacle. Using the variable selection regression process (Lasso logit), three variables were identified that were predictive of the dependent variable "Competition with informal sector." As the credit card debt (Ind264) and the situation of the sector (Ind164) relationship with the dependent variable is considered correlation not causal, these variables were dropped from the model; resulting a model with one predictive variable, that was statistically significant and predictively explained 15.6% (Pseudo R-squared) of the behavior of competition with informal sector in Honduras. The effect tends to be incremental for paying taxes (as an obstacle) $[z_{522} = 12.110, p = 0.000]$. Honduran firms that considered paying taxes as a severe obstacle (Ind257) tends to be 4.8 times more likely to consider competition with informal enterprises as a severe obstacle.

FIGURE 188. LOGISTIC REGRESSION FOR COMPETITION WITH INFORMAL SECTOR

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Competition with informal sector as an obstacle (Ind256) Pseudo R-squared = 0.1559 Responses 522	Paying taxes (as an obstacle) (Ind257)	4.775***	3.707	6.150	0.617
	/cut1	0.598	0.255	0.941	0.175
	/cut2	2.998	2.553	3.443	0.227

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#13 FAIR COMPETITION IN SECTOR

INDICATOR # 119 – THE PERCENTAGE OF ENTERPRISES THAT AGREE COMPETITION IN THEIR SECTOR IS FAIR

Fair competition in the sector measures the level of agreement of Honduran firms that there is fair competition in the sector where firms have equal opportunities to grow (Ind119), with the five incremental levels being: strongly disagree, disagree, neutral, agree, and strongly agree. Using the variable selection regression process (Lasso), at least five variables were identified as predictors of the dependent variable "Fair competition in the sector" in a first regression. Since the existence of effective dispute resolution options is a proxy for conflict resolution (Ind122), this variable was omitted, in addition to the variables: number of services accessed by the company (Ind199) and the ability to assume a possible failure (Ind309) were eliminated because these variables are not statistically significant. This resulted in a model with three predictor variables. The results of the second ordinal logistic regression model showed that the selected variable is statistically significant, an acceptable Pseudo R-squared (0.2687), so that these explain in a predictive way the confidence in fair competition in the sector. Its effect is incremental for the following variables: conflict resolution $[z_{557} = 16.600, p = 0.000]$ and infrastructure and public services $[z_{557} = 2.030, p = 0.0042]$ while the effect is negative for competition with the informal sector. $[z_{557} = -2.360, p = 0.018]$.

FIGURE 189. ORDERED LOGISTIC REGRESSION FOR FAIR COMPETITION IN SECTOR

Dependent variable	Independent Variable	Odds ratios	Interval (95% confidence interval)		Error Std.
			Under	High	
Fair competition in the sector (Ind119) Pseudo R2 = 0.2140 Responses 557	Competition with informal sector (Ind169)	0.641**	0.444	0.927	0.121
	Conflict resolution (Ind120)	5.141***	4.237	6.237	0.507
	Infrastructure and utilities (Ind243)	1.075**	1.003	1.153	0.038
	/cut1	2.886	2.285	3.486	0.306
	/cut2	4.371	3.716	5.026	0.334
	/cut3	6.160	5.420	6.899	0.377
	/cut4	8.162	7.303	9.021	0.438

*, **, *** Significance at 90%, 95% and 99% level, respectively.*

#14 PRICING POWER

INDICATOR # 117 – THE DEGREE TO WHICH ENTERPRISES REPORT THEY CAN RAISE PRICES BY 10% BY THE NUMBER OF CLIENTS OR CUSTOMERS THEY EXPECT TO LOSE

This indicator measures the capability that enterprises have to increase the price of their main product or service by 10% without losing 25% of customers (Ind117). Using the variable selection process (Lasso logit), at least five variables were identified as predictors of the dependent variable "Pricing power" in a first regression. Since the competition with informal sector as a shock is mediated by recovering from shocks (Ind175), innovation (Ind315) and fair competition (Ind119) were not statistically significant, these variables were omitted. This resulted in a model with one predictor variable. The results of the ordinal logistic regression model showed that the selected variable is statistically significant, an acceptable Pseudo R-squared (0.0090) to predict behavior of pricing power. Its effect is incremental for the variable recovering from shocks $[z_{515} = 3.400, p = 0.001]$. In this case, for those firms that has completely recovered or avoided the shocks (Ind117), the capacity to rise their prices by a 10% without losing 25% of more of customers are 1.4 times greater.

FIGURE 190. ORDERED LOGISTIC REGRESSION FOR PRICING POWER

Dependent variable	Independent Variable	Odds ratios	Interval (95% confidence interval)		Error Std.
			Under	High	
Pricing power (Ind117)	Recovering from shocks (Ind175)	1.399***	1.153	1.698	0.138
	/cut1	0.661	0.177	1.144	0.247
Pseudo R2 = 0.0090	/cut2	1.206	0.714	1.699	0.251
Responses 515	/cut3	1.954	1.443	2.464	0.260

*, **, *** *Significance at 90%, 95% and 99% level, respectively.*

#15 DISPUTE RESOLUTION

INDICATOR # 122 – THE DEGREE OF AGREEMENT THAT EFFECTIVE DISPUTE RESOLUTIONS EXIST

Dispute resolution measures the level of agreement of Honduran companies that effective dispute resolution options exist between companies (Ind122), with the five incremental levels being: strongly disagree, disagree, neutral, agree, and strongly agree. Using the variable selection regression process (Lasso), at least two variables were identified as predictors of the dependent variable "Mechanisms for conflict resolution" in a first regression. Since relationships with companies owned by relatives has no theoretical relationship with the dependent variable, it was omitted, resulting in a model with one predictor variable. The results of the second ordinal logistic regression model applied showed that the selected variable is statistically significant, but with a Pseudo R-squared of 0.0896, so that statistically it cannot explain in a predictive way the trust in conflict resolution mechanisms for Honduran companies; but allows for understanding the relationship between the variables exists. Its effect is incremental for institutions/rule of law $[z_{544} = 11.250, p = 0.000]$.

FIGURE 191. ORDERED LOGISTIC REGRESSION FOR DISPUTE RESOLUTION

Dependent variable	Independent Variable	Odds ratios	Interval (95% confidence)		Error Std.
			Under	High	
Dispute resolution (Ind122)	Institutions / Rule of law (Ind119)	2.313***	1.998	2.677	0.172
	/cut1	0.231	-0.192	0.655	0.216
Pseudo R2 = 0.0896	/cut2	0.981	0.560	1.403	0.215
	/cut3	3.214	2.710	3.717	0.257
Responses 544	/cut4	4.928	4.331	5.525	0.305

*, **, *** *Significance at 90%, 95% and 99% level, respectively.*

#16 CONFIDENCE IN OTHER ENTERPRISES

INDICATOR # 123 – THE DEGREE TO WHICH ENTERPRISES REPORT THEY CAN TRUST IN OTHER ENTEPRISES

This indicator measures the level of trust Honduran firms have in other enterprises in the sector (Ind123), the incremental levels being: strongly disagree, disagree, neutral, agree and strongly agree. Using the variable selection regression process (Lasso logit), six variables were identified that were predictive of the dependent variable "Trust in other enterprises" in a first regression. confidence in competitors (Ind138) and institutions / rule of law (Ind122) were omitted because they are proxies of the dependent variable. resulting a model of four predictive variables. The selected variables were statistically significant and predictively explained 16.6% (Pseudo R-squared) of the behavior of the trust in other enterprises in the sector. The effects tend to be incremental for

the four variables: conflict resolution $[z_{470} = 10.150, p = 0.000]$, collaboration index $[z_{470} = 3.760, p = 0.000]$, long-term business relationships $[z_{470} = 6.150, p = 0.000]$ and small group $[z_{470} = 2.360, p = 0.018]$.

- Honduran firms that strongly agree with a fair dispute resolution (Ind120) tend to be 2.7 times more likely to strongly trust in other enterprises of the sector.
- For one unit that collaboration index increased (Ind131), odds ratios for Honduran firms to strongly trust in other enterprises of the sector increases 1.3 times.
- The Honduran firms that reported long-term business relationships (Ind121) are expected to be 1.7 times more likely to strongly trust in other enterprises within the sector.
- For those firms that reported their core business relationships are family related (Ind118) are expected to be 1.2 times more likely to strongly trust in other enterprises of the sector.

FIGURE 192. ORDERED LOGISTIC REGRESSION FOR TRUST IN OTHER ENTERPRISES (IN THE SECTOR)

Dependent variable	Independent Variable	Odds ratios	Interval (95% confidence interval)		Error Std.
			Under	High	
Trust in other enterprises (Ind123) Pseudo R2 = 0.1656 Responses 470	Conflict resolution (Ind120)	2.683***	2.218	3.247	0.261
	Collaboration index (Ind131)	1.250***	1.113	1.404	0.074
	Long-term business relationships (Ind121)	1.705***	1.439	2.021	0.148
	Small group (Ind118)	1.196**	1.031	1.387	0.091
	/cut1	2.879	2.047	3.711	0.424
	/cut2	4.195	3.332	5.057	0.440
	/cut3	6.280	5.331	7.229	0.484
	/cut4	8.479	7.417	9.542	0.542

*, **, *** *Significance at 90%, 95% and 99% level, respectively.*

INDICATOR # 138 – THE DEGREE OF CONFIDENCE ENTERPRISES REPORT THEY HAVE IN OTHER ENTERPRISES

This indicator measures the level of confidence Honduran firms have in other enterprises (Ind123), the incremental levels being: strongly disagree, disagree, neutral, agree and strongly agree. Using the variable selection regression process (Lasso logit), three variables were identified that were predictive of the dependent variable "Confidence in other enterprises". The selected variables were statistically significant and predictively explained 8.9% (Pseudo R-squared) of the behavior of level of confidence in other enterprises. The effects tend to be incremental for the three variables: conflict resolution $[z_{444} = 3.440, p = 0.001]$, collaboration index $[z_{444} = 6.410, p = 0.000]$ and effective options for conflict resolution $[z_{444} = 2.070, p = 0.038]$.

- Honduran firms that strongly agree there's a fair dispute resolution (Ind120) tend to be 1.4 times more likely to have strong confidence in other enterprises.
- For one unit that collaboration index increased (Ind131), odds ratios for Honduran firms to have strong confidence in other enterprises increases 1.5 times.
- The Honduran firms that strongly believe there are effective options for conflict resolution (Ind122) are expected to be 1.2 times more likely to have strong confidence in other enterprises.

FIGURE 193. ORDERED LOGISTIC REGRESSION FOR CONFIDENCE IN OTHER ENTERPRISES

Dependent variable	Independent Variable	Odds ratios	Interval (95% confidence interval)		Error Std.
			Under	High	
Confidence in other enterprises (Ind138) Pseudo R2 = 0.0892 Responses 444	Conflict resolution (Ind120)	1.405***	1.157	1.706	0.139
	Collaboration index (Ind131)	1.536***	1.347	1.752	0.103
	Effective options for conflict resolution (Ind122)	1.220**	1.011	1.471	0.117
	/cut1	1.036	0.395	1.676	0.327
	/cut2	3.809	3.067	4.551	0.379

*, **, *** *Significance at 90%, 95% and 99% level, respectively.*

#17 ENTERPRISE LINKAGES / COLLABORATION

INDICATOR # 131 – THE NUMBER OF TYPES OF COLLABORATION REPORTED WITH OTHER ENTERPRISES

This indicator measures the number of types of collaborations Honduran firms reported with other enterprises (Ind131). Using the variable selection regression process (Lasso poisson), five variables were identified that were predictive of the dependent variable "Collaboration index" in a first regression. Competition with informal sector (Ind169) and regulations as a shock (Ind165) were omitted because they are mediated through dispute resolution. resulting a model of three predictive variables. The selected variables were statistically significant and predictively explained 10.8% (Pseudo R-squared) of the behavior of the collaboration index. The effects tend to be incremental for the three variables: trust in other enterprises of the sector $[z_{526} = 3.430, p = 0.001]$, confidence in other enterprises $[z_{526} = 7.490, p = 0.000]$, and confidence in local government $[z_{526} = 7.120, p = 0.000]$.

- Honduran firms that strongly trust in other enterprises of the sector (Ind123) tend to be 1.2 times more likely to collaborate with other enterprises.
- For those firms with strong confidence in other enterprises (Ind138) are expected to have a rate 1.7 times greater to collaborate with other enterprises.
- Honduran firms that report a strong one unit increased in the usage of information technologies (Ind276) are expected to have a rate 1.3 times greater for the collaboration index.

FIGURE 194. POISSON REGRESSION FOR COLLABORATION INDEX

Dependent variable	Independent Variable	Incidence Rate Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Collaboration index (Ind131) Pseudo R2 = 0.1080 Responses 526	Trust in other enterprises of the sector (Ind123)	1.155***	1.063	1.254	0.048
	Confidence in other enterprises (Ind138)	1.697***	1.478	1.949	0.120
	Information technologies (Ind276)	1.286***	1.200	1.378	0.045
	Constant	0.166***	0.117	0.236	0.030

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#18 MARKET ACCESS

In order to access markets, companies at the national level require at least two key factors. On the one hand, to have adequate market opportunities that allow them to compete efficiently and diversify the risks they face; on the other hand, to have access to alternative clients or buyers. For the analysis of this dynamic, two models are considered to determine what conditions are necessary for companies to expand their competition in their current market or into new markets.

INDICATOR # 308 – PERCENTAGE OF ENTERPRISES THAT AGREE THEY HAVE ADEQUATE MARKET OPPORTUNITY

The first model includes the variable "adequate market opportunities" as a response factor and is measured as one of the strengths that companies have to grow in the sector. Using variable selection regression process (Lasso Logit), it was identified that at least eight variables in a first regression were predictive of the dependent variable "market access" (Ind308). Given that there were a significant number of variables that were correlated, but did not maintain a relationship per se, it was decided to perform a second logistic model with six predictor variables, and the results were adequate. It was identified that the selected variables were statistically significant and predictively explained 11.4% (Pseudo R-squared) of the market access behavior of the companies in Honduras. Likewise, the effect tends to be greater and incremental with the six variables used: sector situation $[z_{640} = 4.820, p = 0.000]$ innovation $[z_{640} = 2.110, p = 0.035]$ information usage $[z_{640} = 2.570, p = 0.010]$ access to financing $[z_{640} = 3.220, p = 0.001]$ entrepreneurship $[z_{640} = 2.960, p = 0.003]$ and skilled workforce $[z_{640} = 3.100, p = 0.002]$.

FIGURE 195. LOGISTIC REGRESSION FOR MARKET ACCESS (ADEQUATE MARKET OPPORTUNITIES)

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Market access (Ind308) Pseudo R-squared = 0.1135 Responses 640	Sector situation / competitiveness (Ind149)	1.792***	1.413	2.272	0.217
	Innovation (Ind322)	1.213**	1.013	1.452	0.111
	Information use (Ind295)	1.186***	1.041	1.351	0.079
	Access to financing (Ind307)	1.883***	1.281	2.769	0.370
	Entrepreneurship (Ind309)	1.707***	1.199	2.432	0.308
	Skilled workforce (Ind310)	1.762***	1.232	2.521	0.322

	Constant	0.234***	0.154	0.355	0.050

*, **, *** *Significance at 90%, 95% and 99% level, respectively.*

INDICATOR # 187 – PERCENTAGE OF ENTERPRISES THAT AGREE THEY HAVE ADEQUATE MARKET OPPORTUNITY

The second model uses the variable "access to alternative buyers" which is measured as an ordinal variable with incremental perception scales ranging from strongly disagree to strongly agree. A second market access model (Ind187) was also developed to complement the results of the first model. This model used an ordinal logistic regression that included two independent variables that explained 1.9% of the behavior of market access. The effect found in the dependent variables was larger and incremental in explaining the dependent variable, these variables being: support services and access to buyers. $[z_{533} = 3.820, p = 0.000]$ and access to business links $[z_{533} = 3.360, p = 0.001]$.

FIGURE 196. ORDERED LOGISTIC REGRESSION FOR MARKET ACCESS (ALTERNATIVE CUSTOMERS OR CLIENTS)

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Market access (Ind187) Pseudo R-squared = 0.0190 Responses 533	Support services (Ind200)	1.193***	1.090	1.307	0.055
	Business links (Ind121)	1.268***	1.104	1.456	0.090
	/cut1	-1.354	-1.953	-0.756	0.305
	/cut2	-0.391	-0.952	0.170	0.286
	/cut3	1.221	0.657	1.785	0.288
	/cut4	3.165	2.542	3.787	0.318

*,**, *** *Significance at 90%, 95% and 99% level, respectively.*

#19 ACCESS TO FINANCE

INDICATOR # 192 – THE DEGREE OF CONTRIBUTION OF FINANCIAL SERVICES ACCESSED BY ENTERPRISE

This indicator measures whether accessed or not to the financial services by Honduran firms and the degree of contribution to their business (Ind192), the incremental levels being: not used, nothing, little, much. Using the variable selection regression process (Lasso logit), three variables were identified that were predictive of the dependent variable "Contribution of financial services". The selected variables were statistically significant and predictively explained 3.5% (Pseudo R-squared) of the behavior of the contribution of financial services the enterprises. The effects tend to be incremental for the three variables: consulting services $[z_{488} = 5.000, p = 0.000]$, paying taxes $[z_{488} = 3.010, p = 0.003]$, and exports $[z_{488} = 3.020, p = 0.003]$.

- For those firms that reported accessing to consulting services (Ind194) are expected to be 1.6 times more likely to report a high contribution from financial services in their business.
- For Honduran firms that reported paying taxes (Ind201), odds for considering a high impact from the financial services accessed are expected to be 1.9 times greater.
- Those firms that reported exporting their products or services (Ind21) are expected to have odds 2.1 times greater to report a high contribution from the financial services accessed.

FIGURE 197. ORDERED LOGISTIC REGRESSION FOR FINANCIAL SERVICES CONTRIBUTION

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Financial services contribution (Ind192) Pseudo R-squared = 0.0346 Responses 488	Consulting services (Ind194)	1.552***	1.306	1.843	0.136
	Paying taxes (Ind201)	1.909***	1.254	2.907	0.410
	Exports (Ind21)	2.099***	1.296	3.400	0.516
	/cut1	0.011	-0.449	0.471	0.235
	/cut2	1.773	1.283	2.263	0.250
	/cut3	3.026	2.490	3.561	0.273

*,**, *** *Significance at 90%, 95% and 99% level, respectively.*

#20 SUPPORT SERVICES

INDICATOR # 200 – THE NUMBER OF SUPPORT SERVICES ACCESSED THAT HAD A SIGNIFICANT CONTRIBUTION

This indicator measures the number of support services accessed that had a significant contribution to Honduran firms (Ind200). Using the variable selection regression process (Lasso poisson), six variables were identified that were predictive of the dependent variable "Support services" in a first regression. Investment (Ind154) was omitted because relationships is believed to be inverse. resulting a model of five predictive variables. The selected variables were statistically significant and predictively explained 8.9% (Pseudo R-squared) of the behavior of the support services contribution. The effects tend to be incremental for all variables: information usage $[z_{585} = 4.850, p = 0.000]$, entrepreneurial capacity $[z_{585} = 2.380, p = 0.017]$, innovation $[z_{585} = 5.920, p = 0.000]$, sector situation / competitiveness $[z_{585} = 4.000, p = 0.000]$ and good government interaction $[z_{585} = 6.670, p = 0.000]$.

- For one unit increased in the number of information qualified as good (Ind305) enterprises are expected to have a rate 1.1 times greater for the number of support services accessed with significant contribution.
- For one unit increased in the entrepreneurial capacity index (Ind312) enterprises are expected to have a rate 1.1 times greater for the number of support services accessed with significant contribution.
- Those firms that reported lots of other enterprises have their innovated product or service (Ind322) are expected to have a rate 1.2 times greater for the number of support services accessed with significant contribution.
- For any increase in the level for the perception of the situation in the sector (Ind149) Honduran firms are expected to have a rate 1.2 times greater for the number of support services accessed with significant contribution.
- Those firms that reported having good interactions with government institutions (Ind230) tend to have a rate 1.1 times greater for the number of support services accessed with significant contribution.

FIGURE 198. POISSON REGRESSION FOR SUPPORT SERVICES

Dependent variable	Independent Variable	Incidence Rate Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Support services (Ind200) Pseudo R2 = 0.0890 Responses 585	Information usage (Ind305)	1.123***	1.072	1.177	0.027
	Entrepreneurial capacity (Ind312)	1.077**	1.013	1.146	0.034
	Innovation (Ind322)	1.234***	1.151	1.323	0.044
	Sector situation / competitiveness (Ind149)	1.214***	1.104	1.335	0.059
	Good government interactions (Ind230)	1.118***	1.082	1.155	0.019
	Constant	0.644***	0.534	0.777	0.062

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#21 ENTREPRENEURSHIP AND INNOVATION

INDICATOR # 312 – ENTERPRISE SCORE OF ENTREPRENEURIAL CAPACITY INDEX

The indicator is measured in a scale from zero to five, where zero indicates the Honduran firms reported they do not have any of the strengths and five means they have all of these strengths. The six strengths listed being: knowledge, financial resources, right market opportunity, capacity of taking risks, qualified personnel, and auto efficiency. Using the variable selection regression process (Lasso linear), six variables were identified that were predictive of the dependent variable "Entrepreneurial capacity". The selected variables were statistically significant and predictively explained 26.1% (R-squared) of the behavior of the entrepreneurial capacity. The effects tend to be incremental for all variables: information technologies $[t_{543} = 5.070, p = 0.000]$, innovation $[t_{543} = 2.910, p = 0.004]$, good government interaction $[t_{543} = 3.430, p = 0.001]$, Information usage $[t_{543} = 5.000, p = 0.000]$, support services $[t_{543} = 2.170, p = 0.031]$ and fair competition $[t_{543} = 3.420, p = 0.001]$.

- For one unit increased in the information technologies index (Ind276) is expected that entrepreneurial capacity index of Honduran firms increases 0.21 units.
- For any degree increased in the level much enterprises have the same innovated product or service (Ind322) is expected that entrepreneurial capacity index increases by 0.15 units.
- For those enterprises that reported having good government interactions (Ind230), are expected the entrepreneurial capacity index increase 0.1 units.
- For those firms that reported having information sources (Ind295), the entrepreneurial capacity index is expected to be increased by 0.18 units.
- The access to support services that reported high contribution to their business (Ind200), is expected to increase the entrepreneurial capacity index of Honduran firms by 0.06 units.
- For those firms that strongly believes there is fair competition in the sector (Ind119) is expected that their entrepreneurial capacity index being increased by 0.12 units.

FIGURE 199. LINEAR REGRESSION FOR ENTREPRENEURIAL CAPACITY

Dependent variable	Independent Variable	Coefficient	Interval (95% confidence interval)		Error Std.
			Under	High	
Entrepreneurial capacity (Ind312) R-square = 0.2610 Responses 543	Information technologies (Ind276)	0.209***	0.128	0.291	0.041
	Innovation (Ind322)	0.153***	0.050	0.256	0.052
	Good government interactions (Ind230)	0.100***	0.043	0.158	0.029
	Information usage (Ind295)	0.183***	0.111	0.255	0.037
	Support services (Ind200)	0.059**	0.006	0.112	0.027
	Fair competition (Ind119)	0.124*	0.053	0.195	0.036
	Constant	1.127	0.819	1.436	0.157

*, **, *** Significance at 90%, 95% and 99% level, respectively.

INDICATOR # 322 – ENTERPRISES THAT REPORTED INNOVATION BY COMMONNESS OF INNOVATION

The indicator measures whether or not the innovations adopted firms in the past year are common in the market (Ind322), the incremental levels being: none, some, much. Using the variable selection regression process (Lasso logit), five variables were identified that were predictive of the dependent variable "Commonness of innovation". The selected variables were statistically significant and predictively explained 14.6% (Pseudo R-squared) of the behavior of the contribution of commonness of the innovations in the market. The effects tend to be incremental for all variables: information technologies $[z_{470} = 8.100, p = 0.000]$, Entrepreneurial capacity $[z_{470} = 2.100, p = 0.036]$, investment in productive capacities $[z_{470} = 2.370, p = 0.018]$, information usage $[z_{470} = 2.120, p = 0.034]$ and qualified personnel $[z_{470} = 2.020, p = 0.044]$.

- For one unit increased in the information technologies index (Ind276), the innovations in the market tend to be 2 times more likely to be adopted for lots of enterprises.
- For one unit increased in the entrepreneurial capacity index (Ind312) in Honduran firms, the innovations in the market tend to be 1.2 times more likely to be adopted for lots of enterprises.
- Those firms that have a higher level of investment in their productive capacities (Ind154), tend to be 1.2 times more likely to report the innovations in the market are adopted for a lot of enterprises.
- Having access to information (Ind305) tends to increase 1.2 times the odds that innovations are common in the market.
- Having qualified personnel in Honduran firms (Ind97) tends to increase 1.2 times the odds that innovations are adopted por many enterprises in the market.

FIGURE 200. ORDERED LOGISTIC REGRESSION FOR COMMONNESS OF INNOVATION

Dependent variable	Independent Variable	Odds ratios	Interval (95% confidence interval)		Error Std.
			Under	High	
Commonness of innovation (Ind322) Pseudo R2 = 0.1458 Responses 470	Information technologies (Ind276)	1.950***	1.659	2.292	0.161
	Entrepreneurial capacity (Ind312)	1.204**	1.012	1.432	0.107
	Investment in productive capacities (Ind154)	1.229**	1.037	1.457	0.107
	Information usage (Ind305)	1.158**	1.011	1.327	0.080
	Qualified personnel (Ind97)	1.216**	1.005	1.470	0.118
	/cut1	3.914	2.978	4.850	0.478
	/cut2	4.656	3.689	5.623	0.493
	/cut3	7.582	6.445	8.719	0.580

*, **, *** *Significance at 90%, 95% and 99% level, respectively.*

#22 INFORMATION USE

INDICATOR # 295 – THE NUMBER OF TYPES OF INFORMATION SOURCES USED BY ENTERPRISES

This indicator represents the number of information sources used by Honduran firms (Ind195), which is a useful tool for their decision-making. Using the poisson regression analysis model, at least two predictor variables have been identified with a – Pseudo R-square [0.0453] being the incremental effects of the model for information technologies $[z_{748} = 7.320, p = 0.000]$ and entrepreneurial capacity $[z_{748} = 4.700, p = 0.000]$.

- Due to an increase of one point in the information technology use index (Ind276), the number of information sources is expected to be 1.1 times higher.
- For each increase in the level of entrepreneurial capacity (Ind312), Honduran firms are expected to have 1.1 times greater access to information sources.

FIGURE 201. REGRESIÓN POISSON PARA FUENTES DE INFORMACIÓN

Dependent variable	Independent variable	Incidence Rate Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Information sources (Ind295) Pseudo R-squared = 0.0453 Responses 748	Information technologies (Ind276)	1.143***	1.103	1.184	0.021
	Entrepreneurial capacity (Ind312)	1.097***	1.055	1.141	0.022
	Constant	1.327***	1.167	1.509	0.087

*,**, *** *Significance at 90%, 95% al 99% level, respectively.*

#23 ENTERPRISE DIGITALIZATION

INDICATOR # 276 – INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) INDEX

This indicator represents the information technology index, which is a composite indicator to measure access to information and communication technologies of Honduran firms (Ind276). Using the variable selection regression process (Lasso), at least three predictor variables of the dependent variable "Information technologies" were identified, reducing the model to two variables. Using the simple linear regression model, it is observed that the variables are statistically significant; however, the model shows an R-square of 0.2287. The effects are incremental for: entrepreneurial capacity $[t_{647} = 10.520, p = 0.000]$ and Collaboration $[t_{647} = 7.420, p = 0.000]$

- The information technology index increases by 0.386 points for each unit increased in the entrepreneurial capacity index (Ind312).
- For each point of increase in the collaboration index (Ind131), an increase of 0.241 points is expected in the use of information technologies.

FIGURE 202. REGRESIÓN SIMPLE PARA TECNOLOGÍAS DE INFORMACIÓN

Dependent variable	Independent variable	Coefficient	Interval (95% confidence interval)		Error Std.
			Under	Under	
Information technologies (Ind276) R-squared = 0.2287 Responses 647	Entrepreneurial capacity (Ind312)	0.386***	0.314	0.458	0.037
	Collaboration (Ind131)	0.241**	0.176	0.305	0.032
	Constant	1.146***	0.928	1.365	0.111

*,**, *** *Significance at 90%, 95% al 99% level, respectively*

#24 SEVERITY SHOCKS AND STRESSORS

INDICATOR # 173 – THE NUMBER OF TYPES OF SHOCKS AND STRESSORS EXPERIENCED

Shocks and stressors measure the number of external shocks and events that Honduran firms have experienced (Ind173) in the last year. Using the variable selection regression process (Lasso), at least six variables were identified as predictors of the dependent variable "Shocks and stressors" in a first regression. Since the sector situation (Ind116) is not significant in a logistic regression, this variable was omitted, resulting in a model with five predictor variables. The results of the second linear regression model applied showed that the selected variables are statistically significant; however, an R-squared of 0.2204 is observed. The incremental effect are as follows for the variables: public administration $[t_{476} = 3.910, p = 0.000]$ crime and theft $[t_{476} = 2.010, p = 0.045]$ informal competition $[t_{476} = 5.570, p = 0.000]$ while the effect is negative for the quality of services of electrical energy $[t_{476} = -4.510, p = 0.000]$ and land transportation $[t_{476} = -2.330, p = 0.020]$.

FIGURE 203. REGRESSION FOR NUMBER OF SHOCKS AND STRESSORS EXPERIENCED

Dependent variable	Independent Variable	Coefficient	Interval (95% confidence interval)		Error Std.
			Under	**High**	

Shocks and stressors (Ind173) R-squared = 0.2204 Responses 479	Electric power (Ind239)	-0.835***	-1.199	-0.471	0.185
	Land transportation services (Ind241)	-0.439**	-0.809	-0.068	0.189
	Public administration (Ind231)	0.309***	0.154	0.465	0.079
	Crime and theft (Ind248)	0.551**	0.013	1.089	0.274
	Informal competition (Ind256)	0.734***	0.475	0.993	0.132
	Constant	3.816***	3.334	4.299	0.245

,, *** Significance at 90%, 95% and 99% level, respectively.*

INDICATOR # 174 – THE NUMBER OF TYPES OF SHOCKS AND STRESSORS EXPERIENCED

The severity of shocks and stressors measures the severity of impact of external shocks or events experienced by Honduran companies in 2020, with the incremental levels being: no impact, mild impact, moderate impact, severe impact, and the worst ever experienced. Using the variable selection regression process (Lasso), at least seven variables were identified as predictors of the dependent variable "Severity of shocks and stressors" in a first regression. However, given that the quality of transportation service (Ind241), the number of negative interactions with public institutions (Ind231), losses due to crime and delinquency (Ind248) and competition with the informal sector (Ind256) are not statistically significant in an ordinal logistic regression, these variables were omitted, resulting in a model with three predictor variables. In this sense, the results of the second ordinal logistic regression model applied showed that the selected variables are statistically significant, with a pseudo R-squared of 0.0363 demonstrating the relationships with the dependent variable. Its effect is incremental for the Covid-19 variable, while it shows an inverse behavior for the Covid-19 variable. $[z_{671} = 6.240, p = 0.000]$ variable, while it shows an inverse behavior for the variable Infrastructure and utilities $[z_{671} = -4.850, p = 0.000]$.

FIGURE 204. ORDERED LOGISTICS REGRESSION MODEL FOR SEVERITY OF SHOCKS AND STRESSORS

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Shocks and stressor severity (Ind174) Pseudo R-squared = 0.0363 Responses 671	Covid-19 (Ind170)	5.301***	3.140	8.952	1.417
	Infrastructure and public services (Ind239)	0.537***	0.418	0.691	0.069
	/cut1	-2.927	-2.259	-2.258	0.361
	/cut2	-1.730	-2.287	-1.173	0.294
	/cut3	- 0.002	-0.523	0.519	0.272
	/cut4	1.677	1.142	2.212	0.279

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#25 RECOVERY FROM SHOCKS AND STRESSORS

INDICATOR # 175 – THE DEGREE OF RECOVERY FROM SHOCKS AND STRESSORS EXPERIENCED BY ENTERPRISE

The recovery from shocks and stressors measures the degree of recovery of Honduran firms from external shocks or events experienced by firms in 2020 (Ind175), with the five incremental levels being: did not recover or closed operations, partially recovered, returned to the same level as before, fully recovered and improved and/or nothing happened (avoided the external event or situation). Using the variable selection regression process (Lasso), at least five variables were identified as predictors of the dependent variable "Recovery from shocks and stressors" in a first regression. Since the quality of support services used (Ind200) by the companies did not prove to be statistically significant, this variable was omitted; in addition, the variable business resilience capabilities (Ind191) did not prove to be statistically significant, resulting in a model with four predictor variables. In this sense, the results of the second ordinal logistic regression model applied showed that the selected variables are statistically significant and predictively explain 19.46% of the degree of recovery from shocks and stressors for Honduran companies. Their incremental effect being: investment in productive capacities $[z_{527} = 5.830, p = 0.000]$ the quality of government administration $[z_{527} = 2.620, p = 0.009]$ infrastructure and public services $[z_{527} = 2.980, p = 0.003]$ while the effect is restrictive for the severity of shocks or stressors. $[z_{527} = -10.190, p = 0.000]$.

FIGURE 205. ORDERED LOGISTICS REGRESSION MODEL FOR RECOVERY FROM SHOCKS AND STRESSORS.

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	

Recovery from shocks and stressors (Ind175) Pseudo R-squared = 0.1946 Responses 527	Investment in productive capacities (Ind154)	1.731***	1.439	2.081	0.163
	Public administration (Ind245)	1.310***	1.071	1.602	0.135
	Infrastructure and public services (Ind243)	1.148***	1.049	1.258	0.053
	Severity of shocks or stressors (Ind174)	0.300***	0.238	0.378	0.035
	/cut1	-5.612	-6.836	-4.388	0.624
	/cut2	-1.277	-2.399	-0.154	0.573
	/cut3	0.213	-0.900	1.326	0.568

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#26 NEGATIVE ENTERPRISE COPING BEHAVIORS

INDICATOR # 175 – COPING BEHAVIORS ADOPTED BY ENTERPRISE TO REACT TO SHOCK OR STRESSOR

Negative business coping behaviors is an index that measures the degree of adoptions of negative measures to cope with shocks and stressors by Honduran companies (Ind185) with the index scale ranging from 0 to 10, where 0 is the lowest degree and 10 is the highest degree of adoption of these measures. Using the variable selection regression process (Lasso), at least eight variables were identified as predictors of the dependent variable "Negative entrepreneurial coping behaviors" in a first regression. However, seven variables were eliminated due to lack of statistical significance and theoretical relationship as predictors, retaining the variables government administration (bad quality) (Ind258) and adding three factors with a greater theoretical relationship, resulting in a model with four predictive variables. The results of the second poisson regression model applied showed that the selected variables are statistically significant, with a Pseudo R-squared (0.0822). The incremental effects of the model being: government administration (as obstacle) $[z_{601} = 5.200, p = 0.000]$ number of shocks and stressors $[z_{601} = 7.600, p = 0.000]$ and severity of shocks and stressors. $[z_{601} = 8.720, p = 0.000]$.

FIGURE 206. POISSON REGRESSION MODEL FOR NEGATIVE BUSINESS COPING BEHAVIORS

Dependent variable	Independent Variable	Incidence Rate Ratio	Interval (95% confidence interval)		Error Std.
			Under	**High**	
Negative business coping behaviors (Ind185) Pseudo R-squared = 0.0822 Responses 601	Government administration (bad quality) (Ind258)	1.228***	1.136	1.327	0.049
	Shocks and stressors (Ind172)	1.140***	1.102	1.180	0.019
	Shock and stressor severity (Ind174)	1.316***	1.237	1.400	0.041
	Constant	0.450***	0.341	0.595	0.064

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#27 BUSINESS RESILIENCE CAPACITIES

INDICATOR # 191 – BUSINESS RESILIENCE CAPACITY INDEX

Business resilience capabilities consider the capacities hypothesized that allow an enterprise to mitigate, adapt to and recover from shocks and stressors experienced. This variable is measured on a scale from 1 to 100, where 1 is the lowest and 100 is the highest level of resilience capabilities. Using the variable selection regression process (Lasso), at least fifteen variables were identified as predictors of the dependent variable "Entrepreneurial resilience capabilities" in a first regression. However, investment in productive capacities (Ind154), certification services (Ind198), information technologies (Ind276), bank loans (Ind263), other firms' innovations (Ind322), advisory services (Ind194), and collaboration to access the market (Ind127) are not statistically significant, these variables were omitted, resulting in a model with six predictor variables. In this sense, the results of the second linear regression model applied showed that the selected variables are statistically significant. The incremental effect for the following variables are: information flows $[t_{426} = 2.250, p = 0.025]$ support services $[t_{426} = 2.010, p = 0.045]$ market access $[t_{426} = 3.040, p = 0.003]$ business linkages $[t_{426} = 1.990, p = 0.047]$ dispute resolution $[t_{426} = 2.370, p = 0.018]$ and innovation $[t_{426} = 2.670, p = 0.008]$.

FIGURE 207. REGRESSION MODEL FOR BUSINESS RESILIENCE CAPACITIES.

Dependent variable	**Independent Variable**	**Coefficient**	**Interval (95% confidence interval)**		**Error Std.**
			Under	**High**	
	Information usage (Ind305)	1.296	0.164	2.427	0.576

Business Resilience Capabilities (Ind191) R-squared = 0.1195 Responses 427	Support services (Ind200)	0.864	0.020	1.708	0.429
	Market access (Ind144)	3.518	1.243	5.793	1.158
	Business linkages (Ind121)	1.517	0.018	3.016	0.763
	Dispute resolution (Ind120)	1.684	0.289	3.079	0.710
	Innovation (Ind321)	1.015	0.269	1.760	0.379
	Constant	50.046	43.692	56.401	3.233

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#28 CLIMATE CHANGE AND WEATHER VOLATILITY

This variable is part of indicator # 172 for the number of types of shocks experienced. The determinants of this variable were not identified in this Diagnostic.

#29 MARKET PRICE VOLATILITY

This variable is part of indicator # 172 for the number of types of shocks experienced. The determinants of this variable were not identified in this Diagnostic.

#30 ENTERPRISE SURVIVAL AND GROWTH

INDICATOR # 15 – PERCENTAGE CHANGE IN ENTERPRISE SALES OVER THE PRIOR YEAR

The business sales indicator measures the percentage change in sales of Honduran companies over the last year. Using the variable selection regression process (Lasso), at least seven variables were identified in a first regression as predictive of the dependent variable "business sales". However, given that the change in price turns out to be a proxy for the situation of the sector it was omitted, leaving a second model with six predictor variables. In this sense, the results of the second linear regression model applied showed that the selected variables were statistically significant and predictively explained 41.3% (R-squared) of the behavior of business sales of companies in Honduras. Likewise, the effect tends to be greater and incremental with the variables: recovery from shocks and stressors $[t_{490} = 8.42, p = 0.000]$ investment in productive capacities $[t_{490} = 2.92, p = 0.004]$ innovation $[t_{490} = 2.24, p = 0.025]$ and market access $[t_{490} = 4.50, p = 0.000]$. However, the effect tends to be negative with the variable negative entrepreneurial coping behaviors $[t_{490} = -2{,}40, p = 0.016]$.

FIGURE 208. REGRESSION MODEL FOR PERCENTAGE CHANGE IN ENTERPRISE SALES.

Dependent variable	Independent Variable	Coefficient	Interval (95% confidence)		Error Std.
			Under	High	
Business sales (Ind 15) R-squared = 0.4132 Responses 490	Recovery from shocks and stressors (Ind175)	17.683***	13.556	21.811	2.101
	Investment in productive capacities (Ind154)	3.874***	1.271	6.478	1.325
	Sector situation / competitiveness (Ind149)	4.179*	-0.303	8.661	2.281
	Innovation (Ind314)	8.704**	1.079	16.328	3.881
	Negative business coping behaviors (Ind185)	-1.561**	-2.838	-0.284	0.650
	Market access (Ind144)	10.800***	6.087	15.514	2.399
	Constant	-87.384***	-99.508	-75.260	6.170

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#31 SECTOR SITUATION / COMPETITIVENESS

INDICATOR # 149 – THE DEGREE TO WHICH ENTERPRISES CONSIDER THE SITUATION OF THEIR SECTOR AS GOOD

The situation of the sector is defined as the degree of perception that Honduran companies have of changes in the economic and social environment of the productive sector in which they are located. This variable is measured on an incremental Likert scale that considers the sector's situation as bad, fair or good. Using the variable selection regression process (linear Lasso), at least four variables in a first regression were identified as being predictive of the dependent variable "sector situation". A fifth variable was included in a second ordinal logistic model, and the results were adequate. It was identified that the selected

variables were statistically significant and predictively explained 21.56% (Pseudo R-squared) of the behavior of the situation of the sector in which the companies are located in Honduras. Likewise, the effect tends to be greater and incremental with four variables used: business confidence $[z_{412} = 8.92, p = 0.000]$ business sales $[z_{412} = 5.950, p = 0.000]$ market access $[z_{412} = 2.69, p = 0.007]$ and inclusive access to jobs. $[z_{412} = 2.32, p = 0.020]$ while negative for poor quality of government administration $[z_{412} = -1.97, p = 0.049]$.

FIGURE 209. ORDERED LOGISTIC REGRESSION FOR SECTOR SITUATION

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Sector situation (Ind149) Pseudo R-squared = 0.2156 Responses 412	Business confidence (Ind153)	1.026***	1.020	1.032	0.003
	Enterprise sales (Ind15)	1.019***	1.013	1.025	0.003
	Government administration (Ind258)	0.750**	0.563	0.998	0.109
	Market access (Ind21)	2.295***	1.252	4.207	0.710
	Inclusive access to jobs (Ind13)	1.634**	1.080	2.473	0.346
	/cut1	1.040	0.152	1.928	0.453
	/cut2	4.032	3.051	5.012	0.500

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#32 BUSINESS CONFIDENCE

INDICATOR # 153 – BUSINESS CONFIDENCE INDEX

Business confidence monitors the optimism of Honduran companies in the face of changes in the country's economic situation. It is a leading indicator used to predict future growth based on perceptions of current and future business conditions. Business confidence index scores are normalized to a scale of 0 to 200, where 0 is No confidence, 100 is neutral and 200 is high confidence. The average business confidence score for Honduran companies was 135.2 out of 200 with a deviation of 43.29, which places this index with high levels of business confidence. Using the variable selection regression process (Lasso), it was identified that at least six variables in a first linear regression were predictive of the dependent variable "business confidence". However, given that the number of types of finance is not a variable that does not adequately explain business confidence, it was decided to omit it, leaving a second model with five predictor variables. In this sense, the results of the second linear regression model applied showed that the selected variables were statistically significant and predictively explained 20.67% (R-squared) of the behavior of business confidence of companies in Honduras. Likewise, the effect tends to be greater and incremental with the variables: market access and access to alternative customers or buyers. $[t_{433} = 4.42, p = 0.000]$ and access to alternative customers or buyers $[t_{433} = 3.85, p = 0.000]$. The effect is low with business sales. $[t_{433} = 2.02, p = 0.044]$. However, the effect tends to be low and negative with the variables: Negative Business Coping Behaviors $[t_{490} = -2{,}40, p = 0.016]$ and Public administration $[t_{433} = -2.62, p = 0.009]$

FIGURE 210. REGRESSION FOR BUSINESS CONFIDENCE INDEX

Dependent variable	Independent Variable	Coefficient	Interval (95% confidence interval)		Error Std.
			Under	High	
Business confidence (Ind 153) R-squared = 0.2067 Responses 433	Market access (Ind144)	14.782***	8.212	21.352	3.343
	Access alternative customers or buyers (Ind187)	6.675***	3.265	10.085	1.735
	Enterprise sales (Ind15)	0.121**	0.003	0.239	0.060
	Negative business coping behaviors (Ind185)	-3.172***	-4.967	-1.377	0.913
	Government administration (Ind258)	-7.399***	-12.955	-1.843	2.827
	Constant	19.240***	122.632	150.248	7.025

, **, * Significance at 90%, 95% and 99% level, respectively.*

#33 INVESTMENT IN PRODUCTIVE CAPACITIES

INDICATOR # 154 – THE DEGREE OF INVESTMENT IN PRODUCTIVE CAPACITIES IN RELEATION TO PRIOR YEAR

Investment in productive capacities is defined as the investments made by companies in training their personnel, in the purchase and acquisition of vehicles, plants and machinery, as well as investment in research and development, ICTs, etc., aimed at increasing production capacities. This variable is on a scale of 1 to 4, which shows whether the company did not invest in these

capabilities and if it did invest how it was compared to 2019. Using the automatic feature selection regression process (linear Lasso), it was identified that at least nine variables in a first ordinal logistic stepwise regression were predictive of the dependent variable "investments in productive capacities". However, since there were a significant number of variables that were correlated, but not related per se, it was decided to run a second model with three predictor variables. The results were adequate, but a fourth variable was added that maintained a good relationship with the dependent variable. In this sense, the results of the third ordinal logistic regression model showed that the selected variables were statistically significant and predictively explained 7.40% (Pseudo R-squared) of the behavior of investment in productive capacities of the companies in Honduras. Likewise, the effect tends to be greater and incremental with the variables: recovery from shocks and stressors $[z_{462} = 7.00, p = 0.000]$confidence in suppliers $[z_{462} = 3.02, p = 0.003]$ and long-term business relationships $[z_{462} = 2.48, p = 0.013]$. However, the effect tends to be close to zero with the variable: business confidence $[z_{462} = 2.63, p = 0.008]$.

FIGURE 211. ORDERED LOGISTIC REGRESSION FOR INVESTMENT IN PRODUCTIVE CAPACITIES

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Investment in productive capacities (Ind 154) Pseudo R-squared = 0.074 Responses 462	Business confidence (Ind153)	1.001***	1.001	1.010	0.002
	Recovery from shocks and stressors (Ind175)	2.315***	1.831	2.929	0.278
	Long-term business relationships (Ind121)	1.202***	1.040	1.389	0.089
	Confidence in suppliers (Ind140)	1.566***	1.170	2.096	0.233

, **, * Significance at 90%, 95% and 99% level, respectively.*

#34 JOB CREATION AND MAINTENANCE

INDICATOR # 40 – PERCENTAGE CHANGE IN PERMANENT EMPLOYEES IN RELATION TO PRIOR YEAR

This indicator measures the percentage change in permanent employment in Honduran companies between 2019 and 2020. Using the variable selection regression process (Lasso), four variables were identified as predictors of the dependent variable "Permanent employment". Since the business confidence index (var153) has no theoretical concordance, this variable was omitted, resulting in a model with three predictor variables. In this sense, the results of the second linear regression model applied showed that the selected variables are statistically significant, with an R-squared of 0.1697. Being their incremental effect for enterprises sales $[t_{489} = 5.820, p = 0.000]$. In contrast, an inverse effect is seen for the variables business ownership by vulnerable groups $[t_{489} = -3.480, p = 0.001]$ and negative business coping behaviors. $[t_{489} = -5.200, p = 0.000]$.

FIGURE 212. REGRESSION FOR CHANGE IN NUMBER OF PERMANENT EMPLOYEES

Dependent variable	Independent Variable	Coefficient	Interval (95% confidence interval)		Error Std.
			Under	High	
Permanent employment (var40) R-squared = 0.1697 Responses 489	Enterprise sales (var15)	0.003***	0.002	0.004	0.000
	Business ownership / vulnerable groups (var13)	-0.124***	-0.194	-0.054	0.036
	Negative business coping behaviors (var185)	-0.042***	-0.058	-0.026	0.008
	Constant	0.083	0.019	0.147	0.033

, **, * Significance at 90%, 95% and 99% level, respectively.*

#35 INCLUSIVE ACCESS TO JOBS

INDICATOR # 63– THE PERCENTAGE OF ENTERPRISE EMPLOYEES WHO ARE FEMALE

This indicator measures the percentage of enterprise employees who are women (Ind63). Using the variable selection process (Lasso linear), one predictive variable was identified for the dependent variable "business ownership by women". The results of the simple linear regression model show an R-squares of 0.0375, with an incremental effect for female employees $[t_{418} =$

$4.030, p = 0.000$]. For businesses that are women employed (var9), an increase of 0.137 percentage points is expected in the proportion of women in total employment.

FIGURE 213. LINEAR REGRESSION FOR PERCENTAGE OF FEMALE EMPLOYEES

Dependent variable	Independent Variable	Coefficient	Interval (95% confidence interval)		Dependent variable
			Under	Alto	
Percentage of female employees (Ind63) Pseudo R-squared = 0.0375 Responses 418	Business ownership by women (Ind9)	0.137***	0.070	0.203	0.034
	Constant	0.320***	0.287	0.352	0.017

*, **, *** *Significance at 90%, 95% and 99% level, respectively.*

INDICATOR # 64 – THE PERCENTAGE OF ENTERPRISE EMPLOYEES WHO ARE YOUTH (15-29)

This indicator measures the percentage of employees who are 15-29 aged. Using the selection variable process (Lasso linear), two variables were identified as predictor for the dependent variable the percentage of youth employees. The selected model is statistically significant and explains 3.8% of the behavior of the percentage of employees that are between the age of 15 and 29. The effect is incremental for age [$t_{501} = -3.08, p = 0.002$] and youth employees [$t_{501} = 2.86, p = 0.004$].

- For one unit of increment in the age (Ind1), is expected that the percentage of youth employees decreases 0.003 points in Honduran firms.
- For those firms that were owned by youth (Ind11) is expected that percentage of youth employees increases 0.14 points.

FIGURE 214. SIMPLE REGRESSION FOR PERCENTAGE OF YOUTH EMPLOYEES

Dependent variable	Independent Variable	Coefficient	Interval (95% confidence interval)		Dependent variable
			Under	Alto	
Percentage of youth employees (Ind63) Pseudo R-squared = 0.0383 Responses 501	Enterprise age (Ind1)	-0.003***	-0.004	-0.001	0.000
	Business ownership youth (Ind11)	0.144***	0.045	-0.054	0.243
	Constant	0.388***	0.352	-0.026	0.424

*, **, *** *Significance at 90%, 95% and 99% level, respectively.*

#36 HOUSEHOLD INCOMES

This variable was not directly measured by enterprise-level data in the 2020 Diagnostic. This variable was added by experts to explain the relation between equitable access to jobs and household expenditures on education.

#37 BUSINESS OWNERSHIP BY WOMEN AND YOUTH

INDICATOR # 9 – PERCENTAGE OF ENTERPRISES OWNED BY WOMEN (51% + OF OWNERS ARE FEMALE)

This indicator is measured in a scale from zero to one, where one represents Honduran firms in which more than 50% of owners are women (Ind9). Using the variable selection process (Lasso logit) two variables were identified as predictor for the dependent variable female owners. The selected variable was statistically significant and the logit regression shows the model explains 6.6% (Pseudo R-squared) of the behavior of the proportion of female owners. The effect is incremental for both variables: promotion of men over women [$Z_{338} = 2.16, p = 0.031$] and female employees [$Z_{338} = 2.68, p = 0.007$].

- Women-owned enterprises were 1.2 times more likely to report discrimination regarding the promotion of men over women for management positions (Ind111), than male-owned businesses. This means that discrimination is a likely barrier faced by women in the economy.
- For on unit of increase in the percentage of female employees (Ind63), is expected that Honduras firms tend to be 1.3 more likely to have a majority of female owners.

FIGURE 215. LOGISTIC REGRESSION FOR FEMALE OWNERS

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Dependent variable
			Under	Alto	
Female owners (Ind9) Pseudo R-squared = 0.0324 Responses 338	Promotion of men over women (Ind111)	1.267**	1.022	1.579	0.139
	Percentage of female employees (Ind63)	3.214**	1.368	7.548	1.40
	Constant	0.161***	0.098	0.264	0.041

*, **, *** *Significance at 90%, 95% and 99% level, respectively.*

INDICATOR # 11 – PERCENTAGE OF ENTERPRISES OWNED BY YOUTH (51% + OF OWNERS ARE YOUTH)

This variable is measured in a scale from zero to one, where one represents Honduran firms in which more than 50% of the owners are between 15 and 29 years old. Using the variable selection process (Lasso logit) two variables were identified as predictor for the dependent variable "Youth owners". The selected variables were statistically significant and the logit regression shows the model explains 3.2% (Pseudo R-squared) of the behavior of the proportion of youth owners. The effect is incremental for the percentage of youth employees $[Z_{501} = 2.670, p = 0.008]$, an inverse effect is seen for age $[Z_{501} = -2.26, p = 0.024]$.

- For one unit of increase in the percentage of youth employees (Ind31), Honduras firms tend to be 4.9 times more likely to have a majority of youth owners.
- While for one unit of increase in the age (Ind1), Honduras firms are 0.95 times less likely to have a majority of youth owners.

FIGURE 216. LOGISTIC REGRESSION FOR YOUTH OWNERS

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Dependent variable
			Under	Alto	
Youth owners (Ind11) Pseudo R-squared = 0.0660 Responses 501	Percentage of youth employees (Ind111)	4.888**	1.523	15.685	2.907
	Age (Indl)	0.953**	0.914	0.993	0.020
	Constant	0.643***	0.287	0.144	0.026

*, **, *** *Significance at 90%, 95% and 99% level, respectively.*

#38 EQUAL PAY IN SECTOR

INDICATOR # 115 – DEGREE OF AGREEMENT WOMEN ARE PAID EQUIVALENT TO MEN FOR SIMILAR WORK

This indicator measures the degree of agreement of Honduran firms that women are paid equivalent to men for the same job (Ind115), the incremental levels going from strongly disagree to strongly agree. Using the variable selection process (Lasso logit) three variables were identified as predictor for the dependent variable "Pay equality". The selected variables were statistically significant and the logit regression shows the model explains 2.3% (Pseudo R-squared) of the behavior of the payment equity. The effect is inverse for both variables, discrimination index $[Z_{417} = -2.920, p = 0.004]$ and percentage of female employees $[Z_{417} = -3.190, p = 0.001]$.

- For one unit of increased in the index of discrimination (Ind114), Honduran firms tend to be 84.5% less likely to strongly agree there´s equality in the wages between men and women.
- Those firms in which more than 50% of the owners are women (Ind9), tend to be 47.9% less likely to strongly agree that there´s equality in the wages between men and women.

FIGURE 217. ORDERED LOGISTIC REGRESSION FOR PAY EQUALITY

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Dependent variable
			Under	Alto	
Pay equality (Ind115) Pseudo R-squared = 0.0231 Responses 417	Discrimination index (Ind114)	0.845**	0.755	0.946	0.049
	Female owners (Ind9)	0.479**	0.305	0.753	0.111
	/cut1	-3.306	-3.802	-2.811	0.253
	/cut2	-1.602	-1.932	-1.272	0.168

	/cut3	2.095	1.707	2.483	0.198
	/cut4	3.248	2.629	3.867	0.316

*, **, *** *Significance at 90%, 95% and 99% level, respectively.*

#39 DISCRIMINATION

The indicator is measured in a scale from once to ten, and show the level of discriminative behaviors (Ind114). Using the variable selection process (Lasso poisson) four variables were identified as predictor for the dependent variable "Discrimination". The selected variables were statistically significant and the ordered logistic regression shows the model explains 2.3% (Pseudo R-squared) of the behavior of the discrimination index. The effect is incremental for payment for security $[Z_{417} = 2.010, p = 0.045]$, an inverse effect is seen for: fair competition $[Z_{385} = -3.040, p = 0.002]$, pay equality $[Z_{385} = -2.850, p = 0.004]$ and confidence in judicial system $[Z_{385} = -3.560, p = 0.000]$.

- The strongly believe that there´s a fair competition (Ind119), is expected to decrease the discrimination index by a factor of 0.91.
- The strongly believe that there´s equality in the wages between women and men (Ind115), is expected to decrease the discrimination index by a factor of 0.85.
- The strong confidence in the judicial system (Ind137), is expected to decrease the discrimination index by a factor of 0.78.
- While, the payment for security (Ind247), is expected to increase the discrimination index by a factor of 1.2.

FIGURE 218. POISSON REGRESSION FOR DISCRIMINATION

Dependent variable	Independent Variable	Incidence Rate Ratio	Interval (95% confidence interval)		Dependent variable
			Under	Alto	
Discrimination (Ind114) Pseudo R-squared = 0.0227 Responses 385	Fair competition (Ind119)	0.905**	0.849	0.965	0.029
	Pay equality (Ind115)	0.854**	0.767	0.952	0.047
	Confidence in judicial system (Ind137)	0783***	0.684	0.896	0.054
	Payment for security (Ind247)	1.183**	1.003	1.394	0.099
	Constant	3.346***	2.372	4.719	0.0587

*, **, *** *Significance at 90%, 95% and 99% level, respectively.*

#40 WORKFORCE SKILLS

INDICATOR # 97 – DEGREE OF AGREEMENT THAT ENTERPRISE HAS QUALIFIED STAFF TO COMPETE IN MARKETS

Qualified personnel measures the level at which companies have or do not have qualified personnel (Ind97), with the incremental levels being: strongly disagree, disagree, neutral, agree and strongly agree. Using the automatic feature selection regression process (Lasso), eight variables were identified as predictors of the dependent variable "Qualified personnel". However, since the variables hired permanent employees (var89), problems hiring permanent staff (Ind96), biosafety training (Ind98), discriminatory jokes (Ind109), ethnic discrimination (Ind112) and investment in training (Ind155) were not statistically significant, resulting in a model of three predictor variables. In this sense, the results of the second ordinal logistic regression model applied showed that the selected variables are statistically significant, with a pseudo R-squared of 0.0541. The incremental effect for the variables: external migration $[z_{156} = 2.780, p = 0.005]$ and investment in productive capacities (staff training) $[z_{156} = 2.740, p = 0.006]$ In contrast, an inverse effect is seen for the variable difficulty in hiring: professional qualification. $[z_{156} = -2.300, p = 0.022]$.

FIGURE 219. ORDERED LOGISTIC REGRESSION FOR WORKFORCE SKILLS

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	High	
Qualified personnel (var97) R-squared = 0.0541 Responses 156	Difficulty hiring – professional qualifications (var90)	0.484**	0.261	0.899	0.153
	External migration (var107)	2.369***	1.290	4.349	0.734
	Investment in productive capacities (staff training) (var99)	2.328***	1.272	4.261	0.718
	/cut1	-4.580	-6.611	-2.549	1.036
	/cut2	-2.948	-3.976	-1.921	0.524

	/cut3	-2.211	-3.031	-1.391	0.419
	/cut4	-0.540	-1.187	0.107	0.330
	/cut5	1.318	0.641	1.995	0.346

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#41 EDUCATION

This variable was not directly measured by enterprise-level data in the 2020 Diagnostic. This variable was added by experts to explain the relationship between workforce skills and the abundance of underemployed individuals in the labor market.

#42 EXTERNAL MIGRATION

INDICATOR # 106 – DEGREE OF AGREEMENT THAT ENTERPRISE HAS QUALIFIED STAFF TO COMPETE IN MARKETS

External migration identifies Honduran firms that have lost employees due to external migration. The results show that for each percentage point increase in the percentage of employees suspended or dismissed (var59), the probability of losing employees due to external migration is 2.3 times higher. Three variables were identified as predictors of the dependent variable "External migration" in the Lasso selection. Since the variables job benefits (var87) and employees lacked basic knowledge required for the job (var93) were not statistically significant in the subsequent ordinal regression model, only one variable remained. In this sense, the results of the second ordinal logistic regression model show that the selected variable is statistically significant, with a pseudo-R-squared of 0.0186, so that while the model cannot explain in a predictive way external migration, it does demonstrate the relationships with an incremental effect for employees suspended or dismissed $[z_{500} = 2.760, p = 0.006]$.

FIGURE 220. LOGISTIC REGRESSION FOR EXTERNAL MIGRATION OF EMPLOYEES

Dependent variable	Independent Variable	Odds Ratio	Interval (95% confidence interval)		Error Std.
			Under	**High**	
External migration (Ind106) Pseudo R-squared = 0.0240 Responses 500	Suspended / dismissed (Ind 179)	2.314***	1.274	4.201	0.704
	Constant	0.073***	0.047	0.115	0.017

*, **, *** Significance at 90%, 95% and 99% level, respectively.

#43 REMITTANCES

This variable was not directly measured by enterprise-level data in the 2020 Diagnostic. This variable was added by experts to explain the relation between equitable external migration and household incomes.