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Doing well by doing good:
The role of Mexico's firms in
achieving sustainable and
inclusive growth

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ECONOMICS DEPARTMENT

**DOING WELL BY DOING GOOD: THE ROLE OF MEXICO'S FIRMS IN ACHIEVING
SUSTAINABLE AND INCLUSIVE GROWTH**

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ABSTRACT/RÉSUMÉ

Doing well by doing good: The role of Mexico's firms in achieving sustainable and inclusive growth

The private sector can be a strategic partner in the pursuit of sustainable and inclusive growth, with the ability to have a profound impact, particularly in areas such as climate change, inclusiveness, equality and good governance. Firms could contribute through three different approaches: philanthropic activities not related to the firm's activities through which businesses seek to contribute to improving social and environmental conditions; initiatives related to the firm's operations to diminish their negative impacts and to strengthen those that are positive; and development of innovative products and services. Particularly in the latest two approaches, firms themselves stand to benefit in terms of business opportunities, cost reduction, and consumer loyalty. This paper analyses how Mexican firms perform in terms of environmental, social, and governance practices. The paper provides evidence suggesting that contributing to sustained and inclusive growth brings several financial and productivity advantages to firms.

This Working Paper relates to the 2017 *OECD Economic Survey of Mexico* (www.oecd.org/eco/surveys/economic-survey-mexico.htm).

JEL classification: E23; E24; H1; I0; I10; J0; J50; M0;

Keywords: inclusive growth, inequality, productivity, environment, participation, ESG, governance, responsible business conduct.

Faire de bons résultats en faisant le bien: Le rôle des entreprises mexicaines dans la réalisation d'une croissance durable et inclusive

Le secteur privé peut être un partenaire stratégique dans la poursuite d'une croissance durable et inclusive qui puisse avoir un impact profond, en particulier dans des domaines tels que le changement climatique, l'inclusion, l'égalité et la bonne gouvernance. Les entreprises peuvent contribuer à travers trois approches différentes: activités philanthropiques non liées aux activités à travers lesquelles les compagnies tentent d'améliorer les conditions sociales et environnementales; initiatives liées aux opérations de l'entreprise afin de réduire leurs impacts négatifs et de renforcer ceux qui sont positifs; et le développement de produits et services innovants. Dans les deux dernières approches en particulier les entreprises elles-mêmes pourront bénéficier en termes d'opportunités d'affaires, de réduction des coûts et de fidélisation des consommateurs. Cet article analyse la performance des entreprises mexicaines en termes de pratiques environnementales, sociales et commerciales. L'article fournit des données suggérant que contribuer à une croissance soutenue et inclusive apporte plusieurs avantages financiers et de productivité aux entreprises.

Ce Document de travail se rapporte à l'*Étude économique de l'OCDE du Mexique, 2017* (www.oecd.org/fr/eco/etudes/etude-economique-mexique.htm).

Classification JEL: E23; E24; H1; I0; I10; J0; J50; M0.

Mots clés : Croissance inclusive, inégalité, productivité, environnement, participation, ESG, gouvernance, conduite responsable des affaires.

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DOING WELL BY DOING GOOD: THE ROLE OF MEXICO'S FIRMS IN ACHIEVING SUSTAINABLE AND INCLUSIVE GROWTH

By Mabel Gabriel, Patrick Lenain, Mirna Mehrez, Julien Reynaud and Payal Soneja¹

The private sector can be a strategic partner in the pursuit of sustainable and inclusive growth, with the ability to have a profound impact, particularly in areas such as climate change, inclusiveness, equality and good governance. Firms could contribute through three different approaches: philanthropic activities not related to the firm's activities through which businesses seek to contribute to improving social and environmental conditions; initiatives related to the firm's operations to diminish their negative impacts and to strengthen those that are positive; and development of innovative products and services. Particularly in the latest two approaches, firms themselves stand to benefit in terms of business opportunities, cost reduction, and consumer loyalty.

This paper analyses how Mexican firms perform in terms of environmental, social, and business practices. The section provides evidence suggesting that contributing to sustained and inclusive growth brings several financial and productivity advantages to firms.

Achieving green and inclusive growth

There is a growing interest for countries in attaining green growth not only as it is related to lower energy intensities but also because it is related to a higher standard of living. Since Mexico has significant natural resource capital, the cost of environmental degradation and the increasing risks posed by climate change could be very high, emphasising the importance of a green-growth agenda. It is vital that the country sets specific goals to reduce the environmental footprint of growth, to substantially increase water-use efficiency across all sectors and to ensure sustainable withdrawals and supply of freshwater to substantially reduce the number of people suffering from water scarcity. Enhancing energy efficiency would also be a key element in promoting low carbon development in Mexico. This strategy should involve better urban planning, solid waste management, energy efficiency and water management, and will require a strong alliance between governments, the private sector and civil society.

Pollution tends to affect the least well off the most. In developing countries, in general, industrial plants tend to pollute more in poorest neighbourhoods (Gangadharan, 2006). In Mexico, less prosperous communities are more likely to be near polluting plants, whose amount of waste released into the water is significantly greater (Chakraborti et al., 2016). This negative association between socio-economic status and pollution is likely to translate into differences in health outcomes across socio-economic groups.

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Green growth projects have a specific focus on creating employment and income opportunities for poor or disadvantaged groups. The green growth component of these interventions often relates to job creation in resource-efficient and low-carbon sectors, developing markets for environmentally sustainable products and creating awareness of resource-efficient practices which results in enhanced well-being for society as a whole. Involvement of the private sector on further developing green growth projects is vital.

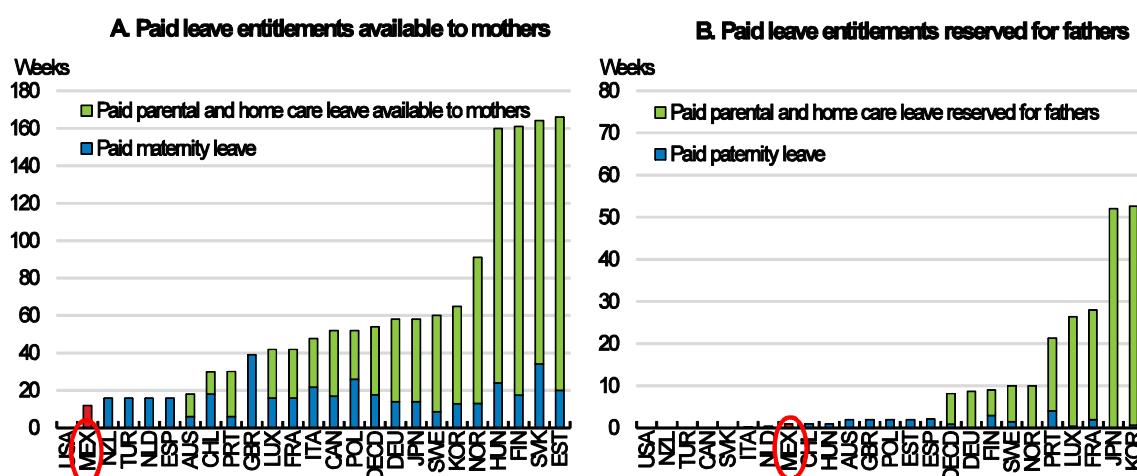
Enabling women's equality and untapped potential

The corporate sector plays a key role in providing access to goods and services that help women improve their living standards and increase their mobility and potential. Enabling women's productivity is important for firms looking for skilled workers and an improved talent pool. Business communities and society as a whole should be open to creating more flexible work environments, promoting work-life balance and diversity, as well as boosting female representation in management.

Achieving work-life balance is a challenge for all workers, especially working parents. Governments and employers can help to address the issue by encouraging supportive and flexible working practices, making it easier for parents to strike a better balance between work and home life, including through greater availability of childcare and pre-school. Moreover, child-related leave entitlements in Mexico are limited relative to other OECD countries. Maternity leave, although paid at 100%, lasts only 12 weeks, while a one week paternity leave was introduced in the last two years, funded by employers.

Parental leave may help reduce discrimination against women in the workplace and particularly in hiring. If men and women are roughly equally likely to take leave, employers will be less reluctant to hire women of childbearing-age. More OECD countries are turning towards reserving non-transferable periods of paid parental leave exclusively for use by fathers (OECD, 2016). In Mexico, a more gender-equitable use of parental leave entitlements, by extending the length of paternity and maternity leave, could level the playing field, reduce the traditional role of women as caregivers, and increase women's working hours.

Figure 1. Paid leave entitlements should be more gender equitable



Note: Panel A: Information refers to parental leave and subsequent periods of paid home care leave to care for young children (sometimes under a different name, for example, “childcare leave” or “child raising leave”). Panel B: Information refers to entitlements to paternity leave, ‘father quotas’ or periods of parental leave that can be used only by the father and cannot be transferred to the mother, and any weeks of sharable leave that must be taken by the father in order for the family to qualify for ‘bonus’ weeks of parental leave.

Source: OECD (2016), OECD Family Database.

Several studies have shown that increasing the number of women in leadership positions is good for business as companies perform better. A diverse company is better able to serve and retain the market. The presence of women might improve team performance by bringing a greater range of perspectives to reach better decisions and consequently better business performance. Companies with three or more women in top management score higher on organisational criteria than companies with no female executives (McKinsey, 2010). Society also regards a higher degree of diversity as positive, and the reputation of the company improves (Carter et al. 2003; Pfeffer and Salancik 1978; Donaldson and Davis 1991). Likewise, a result that follows from the Lückerrath-Rovers (2013) study is that return on equity is consistently higher for companies with women on the board than for companies without women on the board. These results, and a social goal of countering the negative bias in the perception of female leaders, call for measures to increase women’s leadership (Beaman, Chattopadhyay, Duflo, Pande, & Topalova, 2009).

In Mexico, less than 10% of women sit on boards, a very low level compared to other OECD countries. Gender quotas to narrow the gender gap in corporate boards are in place in several countries (e.g. Norway, Belgium, France, Canada (Quebec), etc.), ranging from 30% to 50%, and varying for public and private companies. In Mexico, such quotas could be set voluntarily at first and applied in the public sector to begin with. If improvement in the private sector is unsatisfactory, a mandate with penalties for non-compliance could be introduced. The government should also provide incentives to companies to reduce gender gaps, not just in the boardroom. For instance, companies could be required to report their wage gender gaps, encouraged to set specific goals to reach equal pay for equal work, reduce gender inequalities and to report analysis on how its actions, institutions, and policies affect the well-being of its employees and their families.

The business case for firms to be inclusive and sustainable

Contributing to the achievement of the 2030 United Nations' Sustainable Development Goals brings several advantages for firms such as identifying new business opportunities, attracting capital, strengthening risk prevention, facilitating co-ordination with governments and civil society by having a common purpose, and attracting talent and customer preference, among others (EY, 2015).

Over the course of the last 20 years, a growing share of firms has voluntarily incorporated environmental and social issues in their business models through the adoption of related sustainable policies (Ioannou and Serafeim, 2014). The impact of these policies on the firm's financial performance has received considerable attention (Margolis, et al., 2009). According to some studies, firms that pursue sustainability practices that result in improved corporate governance, resource utilization, business innovation, or employee engagement often outperform their peers (Porter and Van der Linde, 1995; Lundgren and Brännlund, 2010; Kempf, Alexander, and Peer Osthoff, 2007). Likewise, Moore (2001) and Peters and Mullen (2009) concluded that firms that are socially responsible have better performance, with the relationship strengthening over time. Environmental, social, and governance practices of a firm can play a role in improving its productivity by encouraging employees to become more productive. Employees are ready to deploy efforts, work harder, and better for the firms that do good to the society and are environment-friendly, thus, increase their productivity (Greenberg and Baron, 2008; Baron, 2007). On the other hand, some other studies reported null or negative causal relationships (Bellavance et al., 2009; Neilling and Webb, 2009) and causation remains an unresolved issue (El-Sayed and Paton, 2005; McWilliams and Siegel, 2000; Waddock & Graves, 1997; Stuart et al., 2010; Barnett, 2007).

The evidence is particularly relevant for Mexico in which labour and capital markets as well as legal and political institutions are being redefined; however empirical analysis is scarce. Policy makers and managers in the firms should design institutions and guidelines by being fully aware of the power that such institutions have in determining the social, environmental, and governance performance of corporations. Moreover, transparency and the disclosure of the non-financial indicators such as environmental, social, and governance scores (Box 1) should be improved as markets and stakeholders value environmental, social and governance (ESG) performance of the firms and would work as incentive for firms to improve their performance.

Box 1. Environmental, social and governance (ESG) scores

Firms' business practices are measured and scored based on the environmental, social and governance (ESG) criteria which are a set of standards for a company's business practices. Thomson Reuters ASSET4 ESG data provides an overall performance score for each company, as well as scores for 3 pillars:

- The environmental (E) score reflects how well a company uses best management practices to avoid environmental risks and capitalise on environmental opportunities in order to generate long term shareholder value; it is calculated based on indicators of the following categories: resource reduction, emissions reduction, and product innovation.
- The social (S) score measures a company's capacity to generate trust and loyalty with its workforce, customers and society, through its use of best management practices. It is a reflection of the company's reputation and the health of its license to operate, which are key factors in determining its ability to generate long term shareholder value. The score is calculated based on the indicators of the following categories: employment quality, health and safety, training and development, diversity, human rights, community and product responsibility.
- The corporate governance (G) score measures a company's systems and processes, which ensure that its board members and executives act in the best interests of its long-term shareholders. It reflects a company's capacity, through its use of best management practices, to direct and control its rights and responsibilities through the creation of incentives, as well as checks and balances in order to generate long-term shareholder value. Indicators used to calculate this score belong to these categories: board structure, compensation policy, board functions, shareholders rights, and vision and strategy.
- The overall ESG score reflects a balanced view of a company's performance in these three areas: environmental, social and corporate governance pillars.

Scores take values between zero and one helping to categorise firms' performance on five categories: outstanding (0.751 to 1), good (0.584 to 0.75), average (0.417 to 0.583), below average (0.251 to 0.416), and poor (0 to 0.25).

Professional investors use ESG scores to define a wide range of responsible investment strategies and integrate it into their traditional investment analysis. Issues such as climate change, executive remuneration and employee rights are becoming as important as traditional financial metrics for companies and investors when evaluating corporate performance. Investment professionals are able to monitor, rate and benchmark company and portfolio ESG performance against their sector, geographic area or major credit and equity indices (Thomson Reuters).

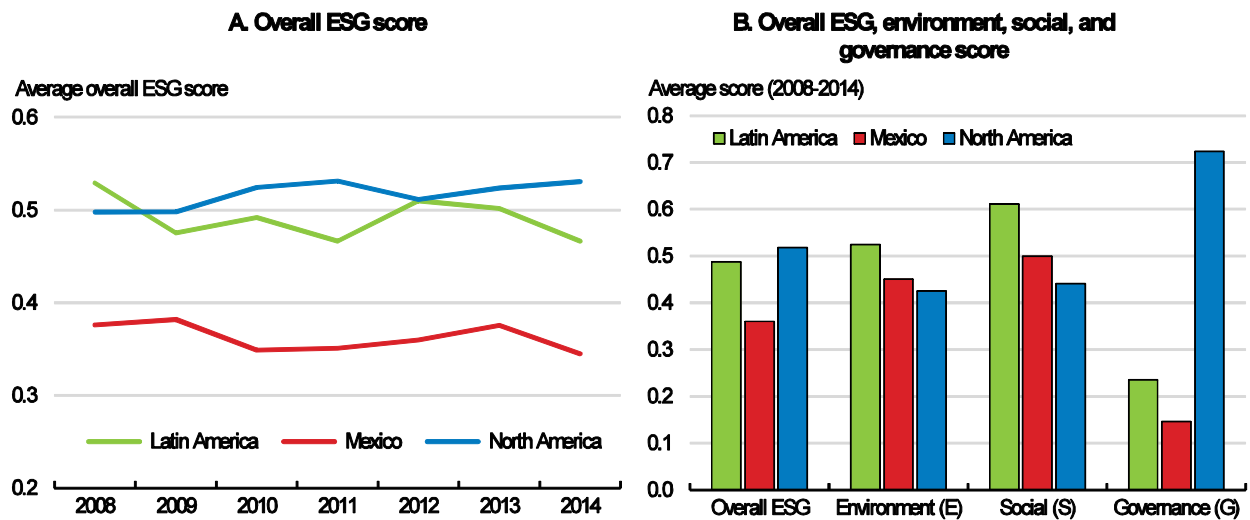
Are Mexican firms doing well by being good?

In the last decade, Mexico has been moving to enrich sustainable business practices. Investors' and stakeholders have been demanding that firms implement environmental, social and governance (ESG) criteria in their core strategy and operations and, moreover, they demand transparency and disclosure from these ESG practices. From 2008 to 2015, the number of publicly listed firms reporting ESG scores has increased from only 13 to 35, still a small number. Despite progress made during recent years, on average, Mexican firms rank the lowest in terms of overall ESG scores compared with North American and Latin American firms (Figure 2).

Looking at the individual environment, social and corporate scores, Mexican firms' average governance score over recent years is the lowest, followed by the environment score and then the social score. In comparison with firms from Latin America and North America, Mexican firms also rank the lowest based on the corporate governance score which might be driving these firms' low overall ESG score. On the other hand, in terms of environment and social criteria, Mexican firms score higher than North American firms on average, although lower than other Latin American firms. Weak legal institutions and lack of effective enforcement of legal standards could be driving Mexican firms' low performance on corporate governance. Hence, improving the judicial means of enforcement would be a step in a good direction to better incentivise firms on improving their corporate governance practices. The OECD

Principles of Corporate Governance (OECD, 2015) build on expertise of policy makers, regulators, business and other stakeholder from around the world to provide recognised benchmark for assessing and improving corporate governance.

Figure 2. **ESG scores of Mexican firms are lower than other Latin American countries**

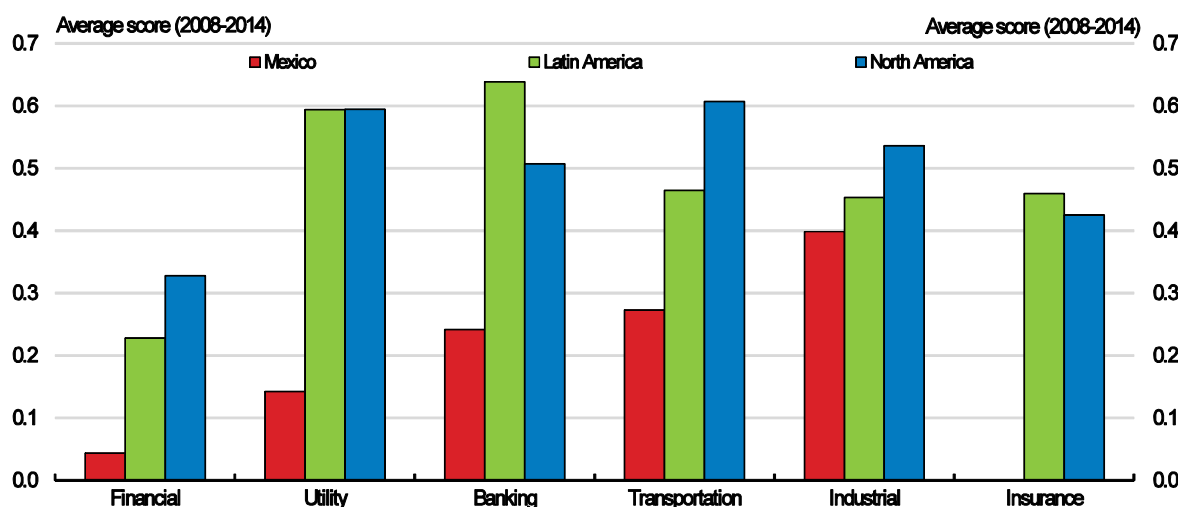


Note: Environmental, social and governance (ESG) scores in North America refer to a simple average of firms from the United States and Canada and scores for Latin America refer to a simple average of firms from Brazil and Chile. Data for Mexico does not include the financial sector given that data for only one firm in 2014 is available. The number of firms reporting ESG scores varies per year.

Source: Adapted from ASSET4 Thomson Reuters data.

The environmental, social, and corporate governance performance of Mexican firms varies across economic sectors. Firms in the industrial sector have the highest average overall ESG score (0.40) in recent years, followed by transportation sector (around 0.27) and the lowest performance in the utility (0.14) and financial sector (0.04). All in all, the sample of Mexican firms compares poorly in all sectors relative to firms in North America and Latin America (Figure 3). A strong legal environment, enforcement and appropriate incentives are needed for firms to undertake significant efforts on sectors lagging behind.

Figure 3. Differences between sectors are large



Note: Environmental, social and governance (ESG) scores in North America refer to simple average of firms from the United States and Canada. Latin America refers to the simple average of firms from Brazil and Chile. ESG data is not available for any Mexican firm in the insurance sector. ESG data in the financial sector is only available in 2014 for one firm. The number of firms reporting ESG scores varies per year.

Source: Adapted from ASSET 4 Thomson Reuters data.

Communities may respond positively to ESG-friendly firms, valuing their practices and additional expenditures, willing to pay more for products from such firms improving their sales and revenues. Likewise, a company that offers its employees trainings, bonuses, compensation, good health insurance and leaves might be rewarded with higher labour productivity as result of higher motivation. Accordingly, using the available panel data on the behaviour of 35 Mexican firms, 1457 North American firms, and 111 Latin American firms spanning over a period of 2008 to 2015, two hypothesis were tested: 1) an ESG-friendly firm is rewarded with better financial performance; and 2) employees in ESG-friendly firms are more productive (Box 2).

Overall, the main findings for Mexican firms suggest a positive association of the overall environment, social, and government score and firms' return on equity, asset turnover, and labour productivity. Firms' revenues are positively associated with all the three scores (E, S, and G) independently while labour productivity is also positively associated with the social and environmental score. The positive association of the overall ESG score with an improvement in firms' financial performance holds when including Latin American and North American firms to the analysis, being particularly evident for firms in the industrial and transportation sector. However, the association with labour productivity becomes weak. Nevertheless, these results highlight the benefits of a comprehensive environment, social and corporate governance management approach towards business performance and the Mexican government should motivate firms to set targets and action plans to increasingly adopt ESG-friendly practices as a way to incentivise firms to do well by being good.

Box 2. Do ESG-friendly firms perform better?

Over the past two decades, sustainable business practices and its relationship with firms' financial performance has gained particular attention. To better understand this relationship, an empirical analysis was conducted using information from Thomson Reuters ASSET 4 dataset on firms' environmental, social, and governance scores and financial indicators as well.

Panel data of 35 Mexican firms, 1457 North American firms, and 111 Latin American firms spanning over a period of 2008 to 2015 is used. Different models were estimated to test the associations between financial performance and labour productivity with each of the ESG scores separately. To better explain this relationship, several other firm characteristics as well as labour productivity determinants are included as controls. Firm controls include: firm size and value based on the logarithm of total assets, market value to equity and price to book ratio, firm age, leverage, liquidity ratio and risk. Country and sector fixed effects are also included as needed.

$$\left(\begin{matrix} \text{Financial indicator} \\ \text{Labour productivity} \end{matrix} \right)_{it} = \alpha + \beta(E, S, G, \text{ESG score})_{it} + \gamma \text{Firm controls}_{it} + \epsilon_{it}$$

Three different financial indicators are used for estimating this model: i) return on assets (ROA) measured as the ratio of EBIT over total assets; ii) return on equity (ROE); and, ii) asset turnover, measured as revenues over total assets. Labour productivity is measured as the logarithm of the ratio of value added (revenues – intermediate inputs) over number of employees.

Both models are estimated with a sample of only Mexican firms (Table 1) as well as for a whole sample that includes Mexican, Latin American (Brazil and Chile) and North American (Canada and the United States) firms. In addition, the model was estimated for the whole sample of countries for each economic sector (industrial, utility, and transportation).

Overall, the main findings for Mexican firms suggest that: i) the environment, social, and government score has no statistically significant association with firms' return on assets (ROA); ii) revenue is positively associated with all the three scores, and finally, iii) labour productivity and return on equity (ROE) are positively associated with the social and environmental score (Table 1). The positive association of the overall ESG score with an improvement on firms' financial performance holds when including Latin American and North American firms to the analysis, being particularly evident for firms in the industrial and transportation sector. However, the association with labour productivity becomes weak (Table 2).

Table 1. **Estimated coefficients on the association between ESG scores and firms' financial and productivity performance: Mexican firms**

Sample: Mexican firms reporting ESG scores ¹					
Variables of interest	Proxies	ESG score	Social score	Environment score	Governance score
Financial performance	Return on assets (ROA)	0.00101 (0.0216)	0.0211 (0.017)	0.000895 (0.0206)	0.00301 (0.051)
	Return on equity (ROE)	0.800** (0.134)	0.863** (0.122)	0.921** (0.128)	0.681 (0.349)
	Asset turnover	0.282* (0.126)	0.442*** (0.105)	0.507*** (0.122)	0.733*** (0.315)
Labour productivity	Value added-based labour productivity	0.534*** (0.235)	0.699*** (0.189)	0.492* (0.224)	0.602 (0.559)

1. Estimations for ROA and asset turnover were estimated also for the whole sample of Mexican firms, i.e. those with and without an ESG score (260 firms). Results are similar and therefore not reported.

Note: *** p<0.01, ** p<0.05, * p<0.1. Sector fixed effects are included. Sample: Mexican firms reporting ESG scores including all sectors. Return on assets (ROA) = EBIT/total assets. Return on equity (ROE). Asset turnover = Revenues/total assets. Value based labour productivity = log(value added/employees).

Source: Adapted from ASSET 4 Thomson Reuters data.

(Box continued...)

Do ESG-friendly firms perform better?

Table 2. Estimated coefficients on the association between ESG scores and firms' financial and productivity performance: Mexican, Latin American and North American firms

Sample: Mexican, Latin American and North American firms reporting ESG scores					
Variables of interest	Proxies	ESG score	Social score	Environment score	Governance score
All sectors					
Financial performance	Return on assets (ROA)	0.0392*** (0.0041)	0.0127 (0.010)	-0.0013 (0.0056)	0.0134 (0.014)
	Asset turnover	0.405*** (0.0302)	0.379** (0.066)	0.251*** (0.018)	0.282 (0.123)
Labour productivity¹	Value added-based labour productivity	0.0063 (0.005)	0.0035 (0.0051)	0.0078* (0.0046)	0.0011 (0.0074)
Industrial sector					
Financial performance	Return on assets (ROA)	0.0421*** (0.00537)	0.0141 (0.0125)	-0.00181 (0.00666)	0.0152 (0.0156)
	Asset turnover	0.412*** (0.0437)	0.378** (0.0841)	0.223*** (0.0361)	0.292 (0.172)
Utility sector					
Financial performance	Return on assets (ROA)	0.0365 (0.0157)	0.0214 (0.0141)	0.0142 (0.00617)	0.0298** (0.00888)
	Asset turnover	0.137 (0.138)	0.0989 (0.0832)	0.0861 (0.119)	0.133 (0.162)
Transportation sector					
Financial performance	Return on assets (ROA)	0.00372 (0.00788)	0.00595 (0.00984)	-0.00467 (0.0122)	0.00498 (0.0120)
	Asset turnover	1.114*** (0.134)	1.137*** (0.160)	0.990** (0.192)	1.497* (0.509)

1. An alternative specification was estimated including other determinants of labour productivity as control variables such as expenditure on R&D, training hours of employees, physical capital and salaries; results do not show a significant relationship of ESG scores and labour productivity.

Note: *** p<0.01, ** p<0.05, * p<0.1. Country fixed effects are included. 'All sectors' refers to industrial, utility, transportation, banking, insurance and financial sector. Return on assets (ROA) = EBIT/total assets. Asset turnover = Revenues/total assets. Value based labour productivity = log(value added/employees).

Source: Adapted from ASSET 4 Thomson Reuters data.

This empirical approach faces limitations and constraints. For instance, the small size of Mexican sample (35 firms) limits the robustness of results and cross-section analysis might be invalid when there is high firm heterogeneity. In addition, the presence of measurement issues of ESG scores and firm performance. As well, the fact that endogeneity might be caused by omitted variables or reverse causality, implies that only association can be determined, neither the direction nor the mechanism of causation. However, aiming to better assess the causal relationship between the ESG scores and firms' financial performance, we followed a granger causality approach (Granger, 1969) based on two regression models:

$$\begin{aligned}
 (\text{financial indicator})_{i,2015} &= \alpha + \\
 \beta 1(\text{financial indicator})_{i,2008} &+ \beta 2\{\text{ESG score}\}_{i,2008} + \beta 3(\text{Firm controls})_{i,2008} + fe(\text{sector})_i + \varepsilon_{1,i} \\
 (\text{ESG score})_{i,2015} &= \alpha + \beta 1(\text{ESG score})_{i,2008} + \beta 2(\text{financial indicators})_{i,2008} + \beta 3(\text{Firm controls})_{i,2008} + \\
 fe(\text{sector})_i &+ \varepsilon_{2,i}
 \end{aligned}$$

(Box continued...)

Do ESG-friendly firms perform better?

Table 3 shows results for the asset turnover indicator and the overall ESG score for years 2008 and 2015. For the first model, we have a statistically significant positive relationship between asset turnover in 2015 and ESG scores in 2008 and the asset turnover in 2008. Moreover, the overall ESG score is significant and positively associated with the overall score in 2008 but is not significantly associated with asset turnover in the past. Therefore, it can be claimed that asset turnover does not granger cause the overall ESG score while a higher overall ESG score granger causes a higher asset turnover for firms on average. Results for other combinations of years were mixed and non-robust.

Table 3. Testing for causality

Independent variable	Dependent variable	
	Asset turnover in 2015	ESG score in 2015
	Estimated coefficient	Estimated coefficient
Intercept	-0.434	-0.374
ESG score in 2008	0.074*	0.594***
Asset turnover in 2008	0.771***	0.020

Note: *** p<0.01, ** p<0.05, * p<0.1. Sector fixed effects are included.
Source: Adapted from ASSET 4 Thomson Reuters data.

Policy recommendations to improve inclusion**Key recommendations**

- Expand public early childcare and pre-school coverage.
- Extend the length of paternity and maternity leaves.
- Better enforce the constitutional provision on gender discrimination, particularly in the workplace, boardrooms and credit markets.

Additional recommendations

- Establish voluntary gender targets to get more women into boardrooms.
- Encourage firms to set targets and action plans to increasingly adopt ESG-friendly practices as a way to incentive firms to do well by being good.
- Improve transparency and the disclosure of non-financial indicators such as environmental, social, and governance scores.

REFERENCES

- Barnett, M. L. (2007), “Stakeholder influence capacity and the variability of financial returns to corporate social responsibility”, *Academy of Management Review*, Vol. 32, No. 3.
- Baron, D. (2007), “Managerial contracting and corporate social responsibility”, *Journal of Public Economics*, Vol. 92.
- Bellavance, F., Makni, Rim, Claude Francoeur (2009), “Causality between corporate social performance and financial performance: Evidence from Canadian firms”, *Journal of Business Ethics*, Vol. 89.
- Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003), “Corporate governance, board diversity and firm value”. *The Financial Review*, Vol. 38.
- Chakraborti, L., Margolis, M., and Sainz Santamaria, J. J. (2016), “Do industries pollute more in poorer neighborhoods? Evidence from toxic releasing plants in Mexico”, *CIDE, Documento de Trabajo Número 597*.
- Donaldson, L., & Davis, J. H. (1991), “Stewardship theory or agency theory: CEO governance and shareholder returns”, *Australian Journal of Management*, Vol. 16, No. 1.
- El-Sayed, Khaled, and David Paton (2005), “The impact of environmental performance on firm performance: static and dynamic panel data evidence”, *Structural Change and Economic Dynamics*, Vol. 16, No. 3.
- EY (2015), “¿Cómo pueden contribuir las empresas a los Objetivos de Desarrollo Sostenible?”, Ernst & Young.
- Gangadharan, Lata (2006), “Environmental compliance by firms in the manufacturing sector in Mexico”, *Ecological Economics*, Vol. 59, No. 4.
- Greenberg, J. and Baron, R.A. (2008), “Behavior in organizations”, Prentice-Hall, Upper Saddle River, NJ.
- Ioannou, I. and Serafeim, G. (2014), “The impact of corporate social responsibility on investment recommendations”, *Harvard Business School, Working Papers*, No. 11-017, February 10, 2014.
- Kempf, Alexander, and Peer Osthoff (2007), “The effect of socially responsible investing on portfolio performance”, *European Financial Management*, Vol. 13, No. 5.
- Lückerath-Rovers, (2013), “Women on boards and firm performance”, *Journal of Management & Governance*, May 2013, Vol. 17, No. 2.
- Lundgren, T. and Brännlund, R. (2010), “Environmental policy and profitability: Evidence from Swedish industry”, *Environmental Economics and Policy Studies*, Vol. 12.
- Margolis, J. D, H. Elfenbein, and J. P. Walsh (2009), “Does it pay to be good... and does it matter? A meta-analysis of the relationship between corporate social and financial performance”, manuscript.
- McKinsey (2010), “Women Matter 3: Women leaders, a competitive edge in and after the crisis”, McKinsey & Company.

- McWilliams, A. and D. Siegel (2000), “Corporate social responsibility and financial performance”, *Strategic Management Journal*, Vol. 21, No. 5.
- Moore, G. (2001), “Corporate social and financial performance: An investigation in the UK supermarket industry”, *Journal of Business Ethics*, Vol. 34, No. 3-4.
- Nelling, E. and Webb, E. (2009), “Corporate social responsibility and financial performance: the ‘virtuous circle’ revisited”, *Review of Quantitative Finance and Accounting*, Vol. 32, No. 2.
- OECD (2017), *OECD Economic Surveys: Mexico 2017*, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/eco_surveys-mex-2017-en.
- <http://www.oecd.org/eco/surveys/economic-survey-mexico.htm>.
- Peters, Richard, and Michael R Mullen (2009), “Some evidence of the cumulative effects of corporate social responsibility on financial performance”, *Journal of Global Business Issues*, Vol. 3, No. 1.
- Pfeffer, J., and Salancik, G. R. (1978), “The external control of organizations: A resource dependence perspective”, Stanford Business Books, Stanford, CA.
- Porter, M. and Van der Linde, C. (1995), “Toward a new conception of the environment competitiveness relationship”, *The Journal of Economic Perspectives*, Vol. 9, No. 4.
- Stuart L. Gillan, Jay C. Hartzell, Andrew Koch, and Laura T. Starks (2010), “Firms’ environmental, social and governance (ESG) choices, performance and managerial motivation”, University of Georgia, University of Texas at Austin, and University of Pittsburgh, Manuscript.
- Thomson Reuters (n.d.), Asset4 ESG scores on creditviews.
- Waddock, Sandra A, and Samuel B Graves (1997), “The corporate social performance-financial performance link”, *Strategic Management Journal*, Vol. 18, No. 4.