

Launch Seminar of the Asia Small and
Medium-Sized Enterprise Monitor 2024

STRATEGIES AND RESILIENCE OF FIRMS FACING COMPETITION FROM THE INFORMAL SECTOR

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Outline

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Background

Informal competition refers to economic activities operating outside formal regulatory frameworks, creating obstacles for formal sector firms.

Challenges for formal firms

Innovation & Productivity

Formal businesses face regulatory constraints (taxation, licensing, labor laws) that informal businesses avoid, creating an uneven playing field (Lamanna, 2007; Williams, 2004).

Non-linear Innovation

There is a non-linear relationship between competitive pressure from informal entities and innovation inclination (Mendi & Costamagna, 2017; Pérez et al., 2021).

Regulatory Disadvantage

Informal competition hinders the ability of formal firms to innovate and improve productivity (Beltrán, 2020; Heredia et al., 2017; Pérez et al., 2021).

Corruption

Formal firms might resort to bribing officials to avoid taxes, obtain favorable regulations, or implement costly compliance measures.

Wider economic implications

- **Tax Revenue Loss:** Informal competition leads to substantial tax revenue loss, undermining government investment in sectors like education and healthcare (Chen & Carré, 2020; Muceku & Muça, 2014).
- **Undermining Regulatory Oversight:** The informal economy weakens state oversight and erodes quality and safety standards (Muceku & Muça, 2014).



Background

Internal innovation strategies

Investing in R&D

Facilitates the development of innovative products, services, or processes to differentiate from informal sector competitors (Mendi & Costamagna, 2017; Pérez et al., 2021).
Competitive pressure from informality boosts innovation efforts in formal firms (Meng, 1995).

Developing New Products and Processes

Innovation in products and business processes is crucial for maintaining a competitive edge, especially with Industry 4.0 technologies (Synnes & Welo, 2016).
Digital transformation enhances efficiency, reduces costs, and increases transparency, supporting long-term performance (Mohammed, 2022).

Distinctive Strategies in Stagnant Industries:

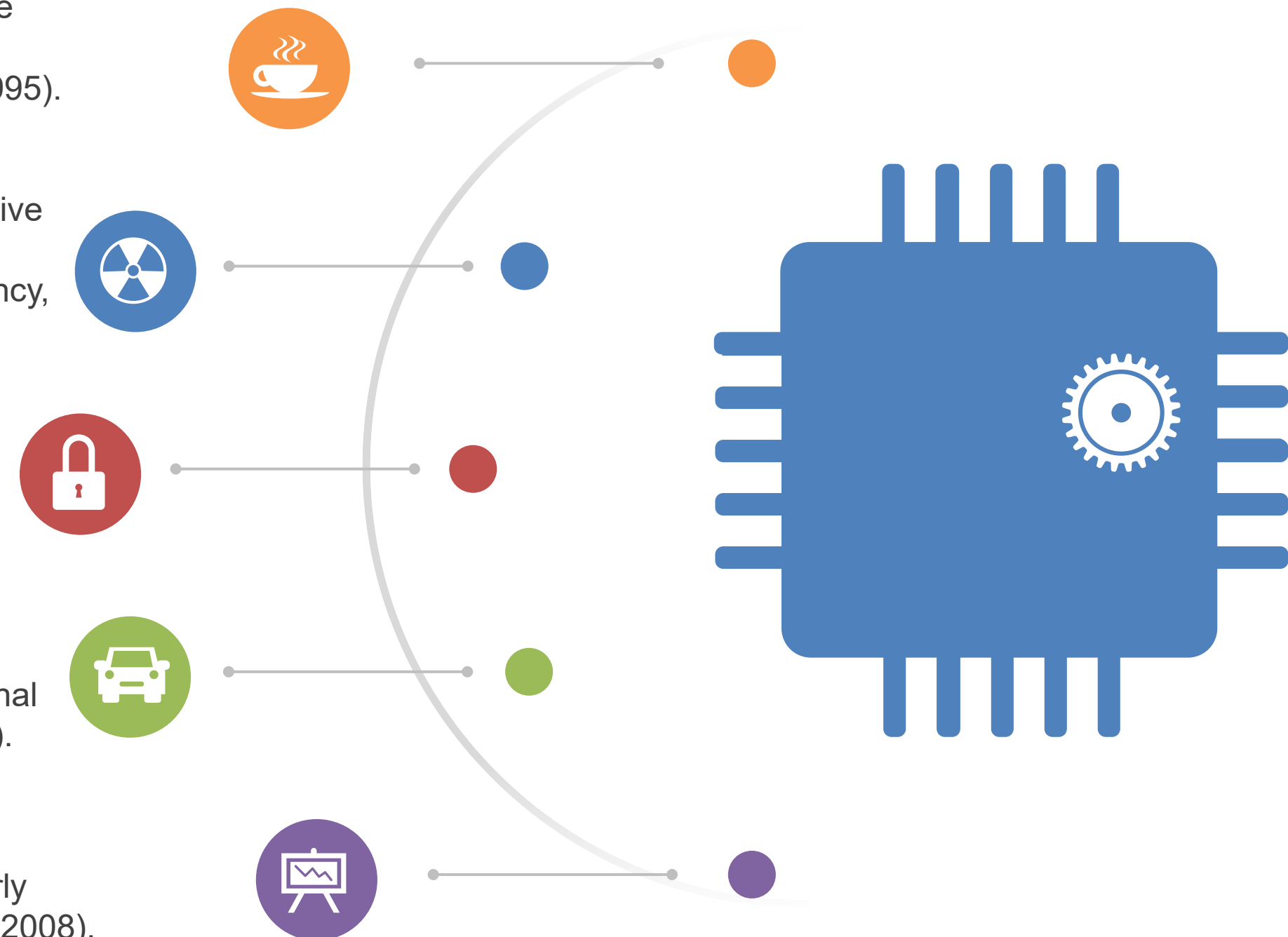
Focus on quality and service differentiation to compete against informal firms that often engage in low-skilled tasks (Calori & Ardisson, 1988; Gebauer et al., 2011; Amaral & Quintin, 2006).

Effective Tax Planning:

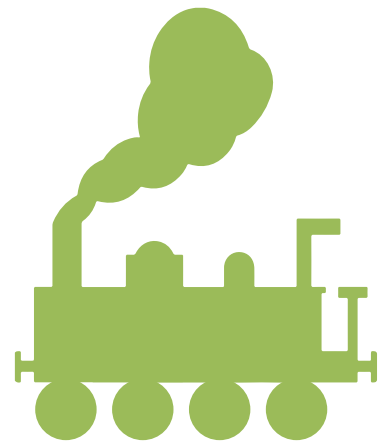
Helps reduce compliance costs and promotes fairer competition, ensuring operational efficiency and improved reputation (Höglund & Sundvik, 2016; Gribnau et al., 2018).

Outsourcing Strategies:

Enables firms to lower operational expenses and focus on core competencies, particularly beneficial for SMEs competing with larger informal sector entities (Leavy, 2004; Elango, 2008).



Research Objectives



Objective: To understand effective internal innovation policies for mitigating competition challenges from the informal sector.

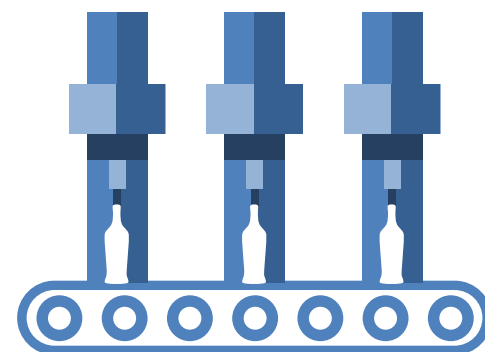


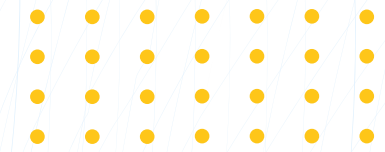
Practical Implications:

- Informing Decision-Making: Identifies effective internal innovation policies and strategies to counter informal sector competition, aiding managerial decision-making and policy development.
- Targeted Interventions: By pinpointing specific actors affected by informal sector competition, policymakers can tailor interventions to target those most in need, thus creating employment opportunities and driving overall economic development (Gönenç et al., 2007; KhaMis, 2014).
- Societal Benefits: Contributes to poverty reduction and decreased income inequality by promoting formal employment and economic participation, benefiting society as a whole (McKague et al., 2015).

Niche and Novelty:

- Dual Focus: This study aims to explore both effective internal innovation policies and map sectors facing obstacles in competing with the informal sector.
- Competitive Dynamics: Enriches the understanding of how formal firms navigate challenges posed by the informal sector.





Literature Review

Key Insights

- Strategic Resources: Unique resources help firms stand out, especially against informal sector competitors (Barney, 1996; Borchert, 2008).
- Innovation: R&D and patents foster innovation and protect against imitation (Pérez et al., 2021).
- Efficiency: Operational efficiency, including economies of scale, is critical in price competition (Lee & Johnson, 2013).

Resource-Based View (RBV) Theory

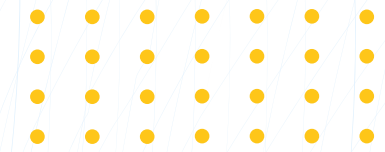
Overview

The RBV theory focuses on how a firm's resources and capabilities can provide a competitive advantage, emphasizing resources with attributes like value, rarity, inimitability, and non-substitutability (Wernerfelt, 1984).

Adaptation & Resilience

- Resource Reconfiguration: Helps firms adapt to disruptions (Parker & Ameen, 2018).
- Financial Resilience: Effective cost and tax management, plus outsourcing, maintain profitability amid competition (Cressman Jr & Nagle, 2002; Wibowo, 2024).





Literature Review

Key Insights

- **Feedback Loops:** Regulatory burdens can push firms toward informality, leading them to demand reforms to reduce compliance costs (Dabla-Norris & Inchauste, 2008).
- **Policy Impact:** Supportive policies (e.g., tax incentives, subsidies) can strengthen formal firms' competitiveness and resilience, while ineffective policies may encourage informality (Miocevic et al., 2022; Hoekman & Smarzynska Javorcik, 2004).
- **Institutional Quality:** Improved institutional quality (e.g., reduced corruption, enhanced efficiency) fosters positive feedback loops, encouraging formalization (Bjørnskov, 2011; Jimenez et al., 2015).

Institutional and Policy Feedback Theory

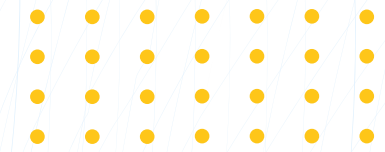
Overview

This theory explores the dynamic relationship between institutions, policies, and societal outcomes, focusing on how feedback loops evolve these elements (Mathias et al., 2015; Qi et al., 2020).

Labor Market Policies

- **Cost and Competitiveness:** Stringent labor regulations can raise costs for formal firms, weakening their competitiveness against informal firms (Faia, 2017; Feldmann, 2008).





Research Method

Model 1: Multinomial Logistic Regression for Firm Performance

Objective:

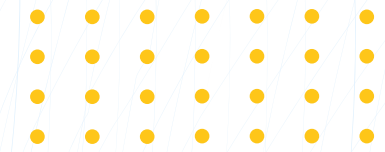
Predict firm performance (Increase, Status Quo, Decrease) based on independent variables.

Equation:

$$\text{logit}(\pi_i) = \beta_0 + \beta_1 X_{IC,i} + \beta_2 X_{NP1,i} + \beta_3 X_{NP2,i} + \beta_4 X_{RD,i} + \beta_4 X_{TM,i} + \beta_4 X_{OP,i} + \beta_5 X_{C,i}$$

Variables:

- **Independent Variables:** International Certification (IC), New Product (NP1), New Process (NP2), Research and Development (RD), Tax Management (TM), Outsourcing Policy (OP)
- **Control Variables:** Various firm-specific factors



Research Method

Model 2: Logistic Regression for Informal Sector Competition

Objective:

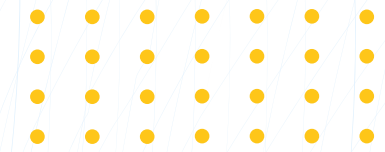
Predict firms facing challenges from informal sector competition.

Equation:

$$\text{logit}(\pi_i) = \beta_0 + \beta_1 X_{1,i} + \beta_2 X_{2,i} + \beta_3 X_{3,i} + \dots + \beta_k X_{k,i}$$

Variables:

Business characteristics, sector, labor, location, years of operation.



Research Method

Model 3: Regression for External Factors Affecting Firm Performance

Objective:

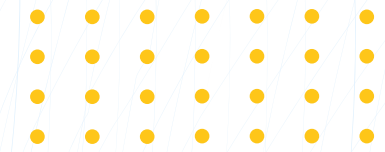
Identify external factors hindering firm performance due to informal market competition.

Equation:

$$FP_i = \alpha_0 + \alpha_1 X_{1,i} + \alpha_2 X_{2,i} + \alpha_3 X_{3,i} + \dots + \alpha_k X_{k,i}$$

Variables:

Access to finance, land, licensing, corruption, courts, crime, regulation, and other external factors.



Research Method

DATA

World Bank Enterprise Surveys (WBES), Indonesia 2023

Conducted via interviews with top managers and business owners to capture a comprehensive view of the business environment.

SURVEY METHODOLOGY

Dual Approach:

- Objective data → Reflects firms' actual experiences.
- Subjective data → Captures managers' perceptions of the business environment.

Stratified Random Sampling:

- Divided businesses into strata based on provincial administrative divisions
- Random selection from each region to ensure representativeness.

PROGRESS COMPANY

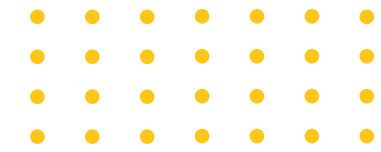
Dependent Variables for Firm Performance:

- Growth of labour → Percentage change in labour force size.
- Growth of sales → Percentage change in sales revenue.
- Growth of labour cost → Percentage change in labour expenditures.
- These metrics offer a concrete understanding of organizational growth and financial performance.

Results

Descriptive statistics

Category	Statistic
Growth Metrics	
Growth of Labour	1.74% (moderate labor force expansion)
Growth of Sales	2.61% (steady sales growth)
Growth of Labour Cost	2.51% (moderate increase in labor costs)
Strategic Initiatives	
International Certifications	11% of firms possess international certifications
New Product Introductions	6% of firms introduce new products
New Process Introductions	3% of firms introduce new processes
Research and Development Engagement	4% of firms engage in R&D activities
Tax and Outsourcing	
Tax Management Outsourcing	18% of firms outsource tax management
Outsourcing Labor Policy	Mean score of 4.10 (wide variation in outsourcing strategies)
Firm Characteristics	
Years of Operation	Average of 19.63 years (indicating mature and experienced firms)
Firm Size	83% small, 5% medium, 5% large industries
Female Leadership	24% of firms are led by women
Labor Composition	
High-skilled Workers	32.20 average per firm
Semi-skilled Workers	16.14 average per firm
Low-skilled Workers	12.36 average per firm
Market and Sector Representation	
Domestic Operations	75% of firms operate domestically
Direct Exports	6% of firms engage in direct exports
Indirect Exports	8% of firms engage in indirect exports
Manufacturing vs Services	Balanced representation of both sectors
Competition with Informal Sector	
Informal Sector Competition	Challenge across Indonesia, not limited to Java
Regions with High Informal Sector Competition	Greater Jakarta, West Java, East Java, Central and South Kalimantan, West Sumatra
Regions with Lower Informal Sector Competition	Smaller islands with fewer formal businesses and geographical barriers reducing competition with informal sector



Results

Adjusted odds ratio obtained from logistic regression:
The determinant of firms facing competition with the informal sector

Variable	(1)	(2)	(3)	(4)
Years of operation	1.009*** (0.003)	1.010*** (0.003)	1.007** (0.003)	1.009** (0.003)
Female leader	0.914 (0.082)	0.936 (0.085)	0.950 (0.087)	0.946 (0.090)
National sales		1.004*** (0.001)	1.004*** (0.001)	1.005*** (0.001)
Indirect exports		1.013*** (0.003)	1.013*** (0.003)	1.014*** (0.003)
Direct export		1.003 (0.002)	0.999 (0.002)	0.999 (0.002)
High-skilled labors			1.003** (0.001)	1.003*** (0.001)
Large firms				1.508* (0.339)
Garments				1.713** (0.416)
Retail				1.455** (0.245)
Hotels				1.612** (0.334)
ICT				1.651* (0.456)
Regional dummies	Yes	Yes	Yes	Yes
Observations	2789	2789	2789	2789

Notes: Figures in parentheses are robust standard errors; *, **, and *** represent statistical significance at 10%, 5%, and 1%, respectively.

Who is facing obstacles in competition with the informal sector?

Factor	Description	Impact on Informal Sector Competition
Duration of Operation	Companies operating for a longer time develop market presence, brand recognition, and distribution networks.	Increased likelihood of facing informal competition (correlation 1.009).
Scale of Operations	Larger firms benefit from economies of scale but face challenges like reduced flexibility and regulatory oversight.	Larger firms more susceptible to informal competition (correlation 1.508).
Industry Dynamics	Industries like garments, hotels, and ICT are labor-intensive with low barriers to entry, while chemicals and non-metallic minerals have higher capital requirements.	Garments, hotels, and ICT industries are more vulnerable; chemicals and non-metallic minerals are less vulnerable.
Firm Type	Domestic firms face challenges like reliance on informal distribution networks and limited resources, while export firms have specialized knowledge in international trade.	Domestic firms more vulnerable; direct export firms less vulnerable.

Results

**Adjusted odds ratio obtained from multinomial logistic regression:
Strategies for Firms Facing Informal Sector Competition**

Variables	(1)		(2)		(3)	
	Growth of labour		Growth of sales		Growth of labour cost	
	Decrease	Status quo	Decrease	Status quo	Decrease	Status quo
	Reference = Increase		Reference = Increase		Reference = Increase	
International Certification	2.506***	1.070	2.348***	1.063	2.728***	1.160
	(0.706)	(0.297)	(0.534)	(0.271)	(0.610)	(0.234)
New product	0.842	0.668	0.778	0.721	0.893	1.041
	(0.252)	(0.189)	(0.266)	(0.253)	(0.298)	(0.275)
New process	0.713	1.312	0.781	1.077	1.044	0.171***
	(0.323)	(0.522)	(0.368)	(0.470)	(0.427)	(0.104)
R&D	1.536	0.921	1.741	1.568	1.664	1.073
	(0.613)	(0.373)	(0.637)	(0.546)	(0.581)	(0.358)
Tax management	0.911	0.657**	1.085	1.069	1.073	0.593***
	(0.176)	(0.122)	(0.218)	(0.214)	(0.212)	(0.101)
Outsourcing policy	1.001	0.995	0.996	1.004**	1.001	0.996
	(0.001)	(0.003)	(0.005)	(0.002)	(0.001)	(0.004)
Years of operation	0.996	1.001	0.991	1.005	0.984**	1.011**
	(0.006)	(0.006)	(0.007)	(0.006)	(0.007)	(0.005)
Small firm	1.257	1.072	0.787	0.773	0.812	0.857
	(0.341)	(0.266)	(0.197)	(0.197)	(0.210)	(0.175)
Large firm	1.584	1.098	0.234**	1.824*	0.639	0.989
	(0.709)	(0.468)	(0.150)	(0.643)	(0.290)	(0.304)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies	Yes		Yes		Yes	
Observations	1645		1645		1645	

Notes: Figures in parentheses are robust standard errors; *, **, and *** represent statistical significance at 10%, 5%, and 1%, respectively.

Strategies for Firms Facing Informal Sector Competition

Strategy	Findings
Impact of International Certifications	<ul style="list-style-type: none"> - Higher odds of decreased labor force growth (2.506) and sales revenue growth (2.348) in certified firms. - Certifications may reduce labor size due to automation and job consolidation. - Certification costs can hinder competitiveness in developing nations.
Innovation and New Processes	<ul style="list-style-type: none"> - New processes reduce the likelihood of labor force decline (0.713) and labor cost decline (0.171), while increasing labor force maintenance (1.312) and sales growth (1.077). - Process innovations improve efficiency, reduce waste, and boost product quality. - Immediate effects of innovation on growth are limited, with delayed outcomes.
Research and Development (R&D)	<ul style="list-style-type: none"> - R&D does not significantly impact short-term growth metrics like labor force, sales, and labor costs. - R&D effects on growth are more indirect or long-term.
Outsourcing Tax-Related Tasks	<ul style="list-style-type: none"> - Outsourcing tax-related activities improves financial performance. - Lowers the odds of labor force decline (0.911) and sales revenue decline (0.657). - Increases labor force growth (1.073) and reduces labor cost growth (0.593).
Scale of Outsourcing	<ul style="list-style-type: none"> - The number of outsourced workers does not significantly impact growth outcomes. - Efficiency and integration of outsourced activities are more critical.

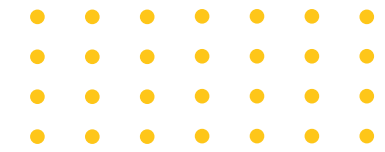
Results

External Factors

External Factor	Impact on Labor Growth	Impact on Sales Growth	Impact on Labor Costs
Corruption	- Decreases odds of labor growth.	- No direct effect on sales growth noted.	- Decreases odds of labor cost growth.
	- Increases uncertainty and inefficiency in business environment, reducing competitiveness.		- Negative impact on business expansion and job opportunities.
Political Instability	- Significant negative association with labor growth.	- No direct effect on sales growth noted.	- No direct effect on labor costs noted.
	- Causes uncertainty and reluctance to invest in expansion or hiring.		
Tax Rates	- Higher tax rates correlate with reduced labor growth odds.	- Higher tax rates correspond to decreased odds of sales growth.	- Increases operational costs, potentially reducing profitability.
	- Discourages workforce expansion due to increased costs.	- Discourages consumer spending and business investment.	
Custom and Trade Regulations	- Negative relationship with labor growth.	- Negative relationship with sales growth.	- Reduces the odds of labor cost growth.
	- Stricter regulations burden formal businesses, hindering employment growth.	- Stricter regulations hinder business expansion, giving informal firms an edge.	- Stricter regulations make it harder for formal businesses to attract skilled labor.

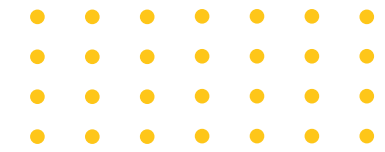
Business Variability

Factor	Manufacturing Sector	Services Sector	Small Firms	Medium Firms
International Certifications	- Curtails workforce and sales growth.	- Limits workforce growth.	- Certifications significantly reduce labor force and sales growth.	- No significant effects observed on growth metrics.
	- Reduces labor costs.	- No impact on sales or labor cost growth.	- Certifying firms face growth-constraining challenges.	
	- Enhances efficiency through automation and standardized procedures.	- Limited reliance on automation, as services focus on interpersonal interactions.		
Research & Development (R&D)	- R&D reduces sales growth.	- No significant impact observed.	- No significant difference in R&D impact.	- No significant difference in R&D impact.
	- Reduces labor costs through automation and efficiency.	- Innovation often intangible, affecting service quality and delivery.		
	- Potential to foster innovation and expansion.			
Product & Process Innovation	- Mixed effects on growth.	- Largely insignificant for growth outcomes.	- New products boost labor growth.	- No significant growth after new products or processes are introduced.
	- More impactful in manufacturing where efficiency and quality are key.	- Customer experience and service quality are more influential.	- New processes may increase labor costs due to training and reorganization needs.	
Outsourcing Tax Management	- No significant difference.	- No significant difference.	- No significant difference.	- No significant difference.



Conclusion





Policy Implications

Tailored policies

Address the specific needs of each sector, especially manufacturing vs. services.



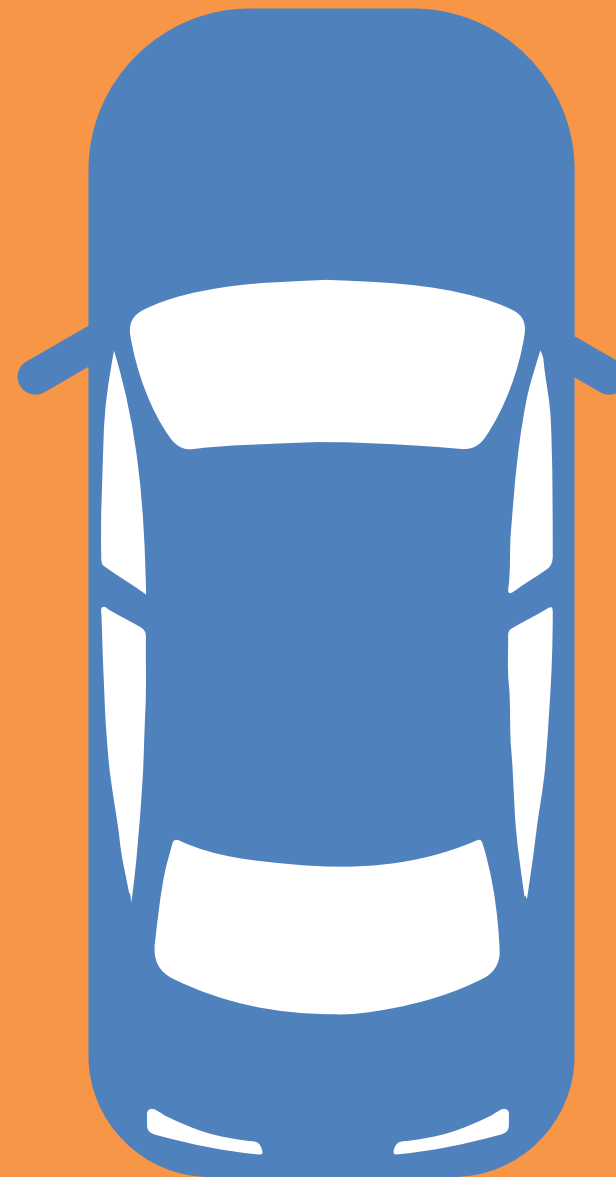
Support for small firms

Provide incentives like certifications and innovation support to help small businesses compete.



Targeted Support for Affected Sectors

Focus on industries like garments and retail facing informal competition.



Tackle Corruption

Implement anti-corruption measures to level the playing field for formal businesses. .



Promote Political Stability

Strengthen governance to boost confidence and resilience in formal businesses.



Revise Tax and Trade Regulations

Simplify policies to ease the burden on formal businesses and improve competition.





Thank You

“The formal sector is the backbone of sustainable economic development, providing stable jobs, taxable income for public investment, and the foundation for inclusive growth that lifts people out of poverty”.

